15-28

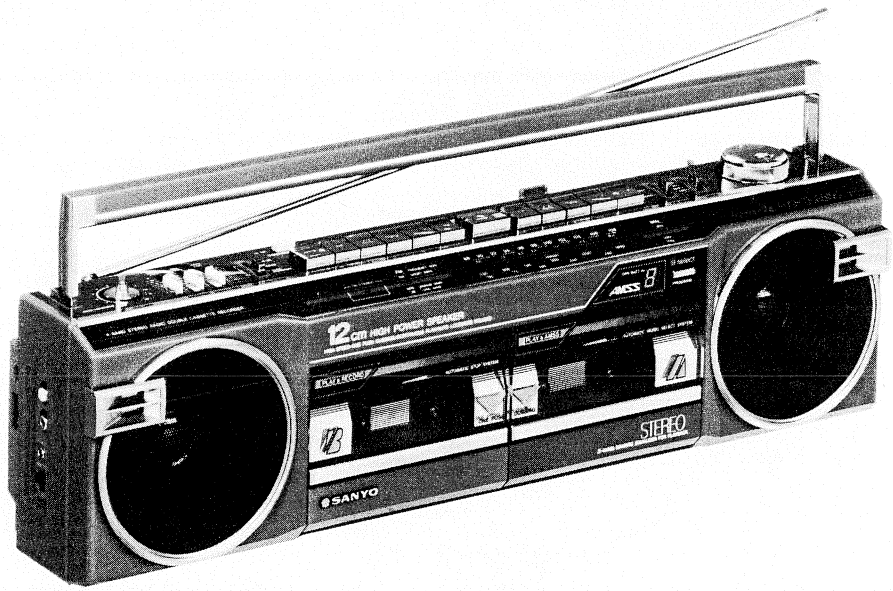
SERVICE MANUAL

SANYO

STEREO RADIO CASSETTE RECORDER

MW725LU

EUROPE



142 450 03 (Red)
142 450 04 (Black)
142 450 05 (White)

SPECIFICATIONS

Power Source
- AC 115/230V
- DC 12V
- (UM-1, HP 2, D Cell, Monozelle, R 20) x 8

Max. Output Power ..... 5W x 2
Power Consumption 23W
Current Consumption (at Vol. Min.)
- Record mode 190mA
- Playback mode 150mA
- Fast Forward mode 120mA
- Rewind mode 120mA

Recording System ..... AC Bias
Erasing System ..... AC Erasing
Tape Speed ..... 1-7/8ips. ±3%
Wow & Flutter ..... 0.1% (WRMS)
Torque
- Playback ..... 30 ~ 55g-cm
- Fast Forward/Rewind ..... more than 55g-cm

Fast Forward/Rewind Time ..... 130sec. (with C-60)

Frequency Response (Overall)
- Fe_2O_3 ..... 100Hz ~ 12,500Hz

Erase Ratio (Overall, with Fe_2O_3) 60dB
Signal to Noise Ratio (with Fe_2O_3) 40dB
Crosstalk (with Fe_2O_3)
- Track to Track 50dB

Channel Separation (with Fe_2O_3) 30dB
Harmonic Distortion (K3/with Fe_2O_3) .. 3%
Hum & Noise (at Vol. Min.) ..... −60dBs
Ocillation frequency 85kHz
Output Level and Impedance
- Headphones 32Ω

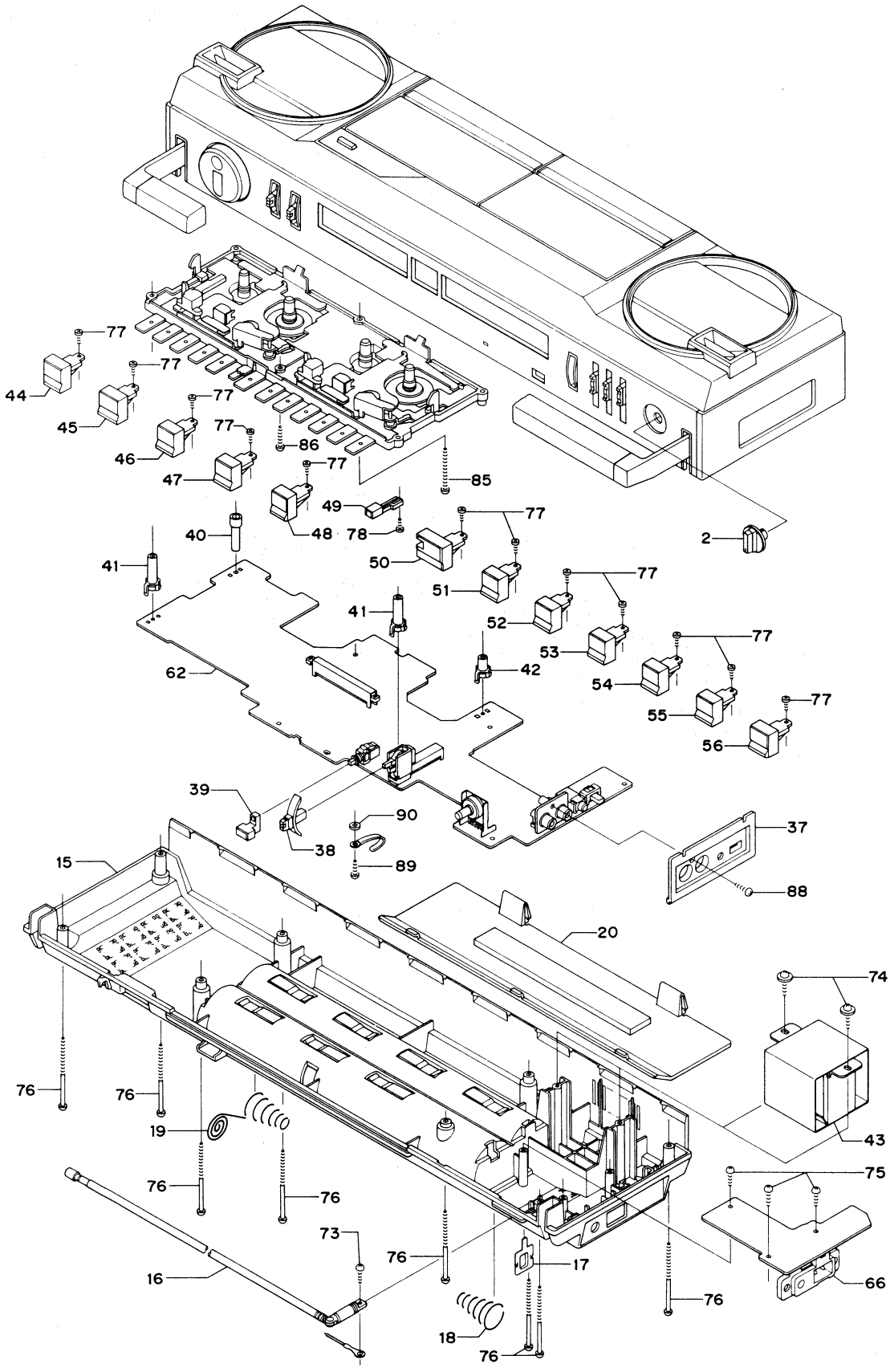
Frequency Range
- LW ..... 150 ~ 280kHz
- MW ..... 525 ~ 1,605kHz
- SW ..... 6 ~ 18MHz
- FM ..... 87.5 ~ 108MHz

−Specifications subject to change without notice.−

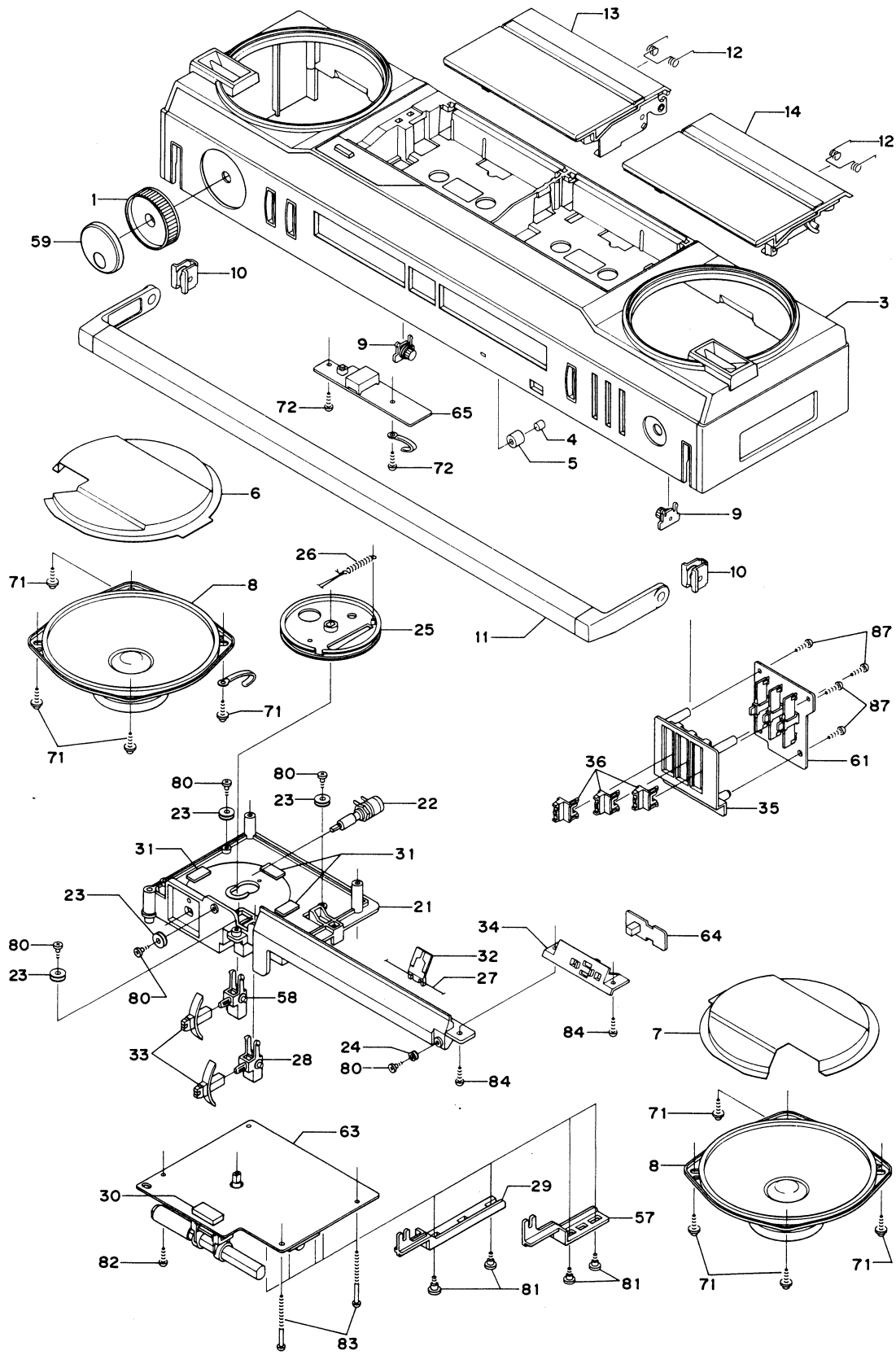
WM-17600

15-28

CABINET EXPLODED VIEW



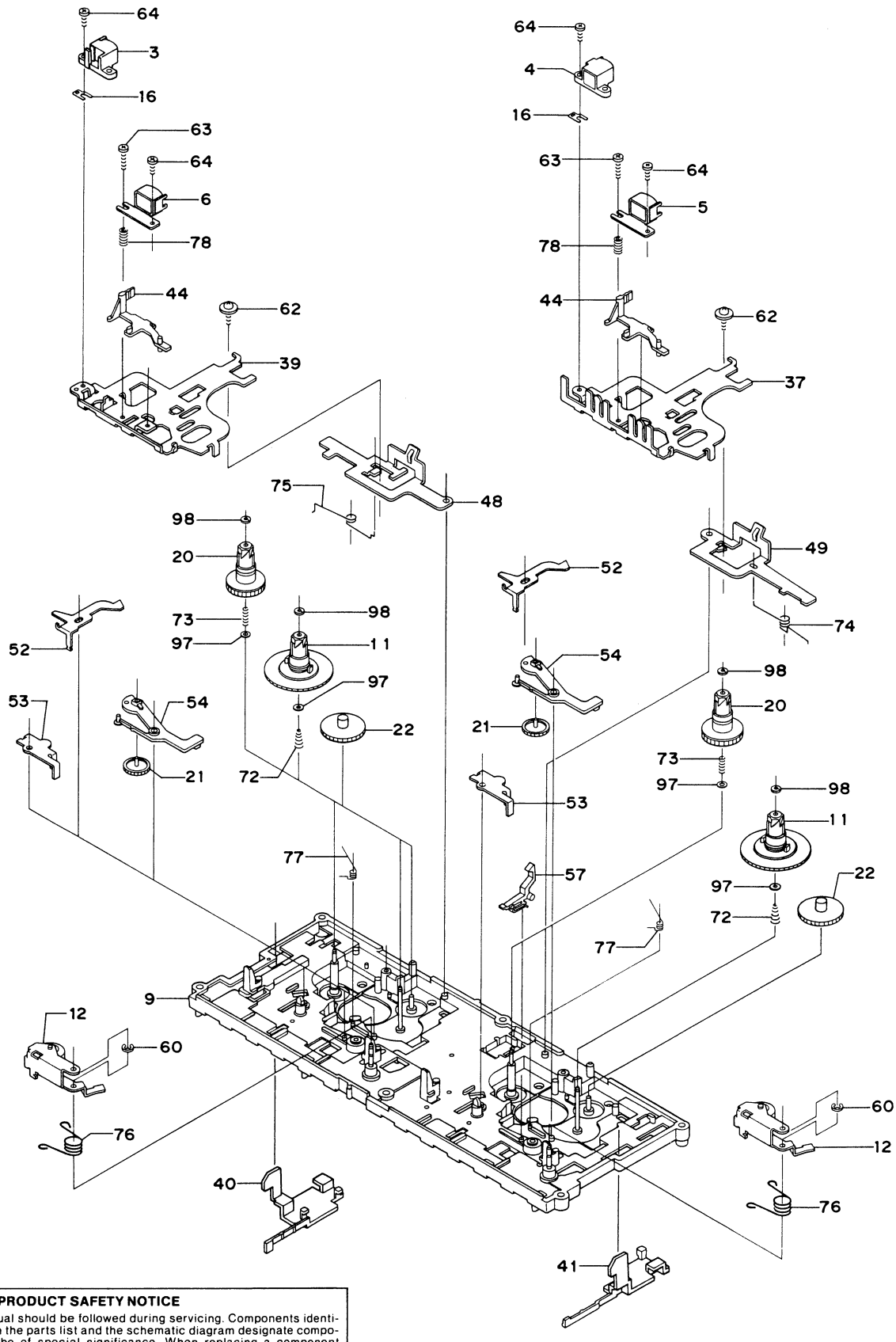
CABINET EXPLODED VIEW (Continued)



CABINET PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	PACKAGE		
	141-6-1419-87001	Individual Carton	1
	141-6-1469-14300	Case Styrofoam Right	1
	141-6-1469-14400	Case Styrofoam Left	1
	141-6-2519-10020	Poly Cover 100 x 200	1
	141-6-2519-23033	Poly Cover 230 x 330	1
	141-6-2519-23890	Poly Cover	1
	141-6-4559-03300	Serial No. Sheet	3
	141-6-4559-03954	Label Color R (Red)	2
	141-6-4559-03979	Label Color BK (Black)	2
	141-6-4559-03952	Label Color W (White)	2
	ACCESSORY		
	4-2419-72222	Cassette	1
	4-2439-70310	Cord Power	1
	141-6-4729-07400	Label Caution	1
	141-6-4729-16700	Label Caution	1
	142-6-4119-32996	Instruction Book	1
	CABINET		
	141-2-4729-04200	Lug	1
	141-2-4729-04100	Lug	1
	4-2359-79677	Connector 3P Assy	1
	4-2439-72771	Wire Assy Receptacle	1
	141-2-4729-04100	Lug	1
1	141-2-1639-62200	Knob Tuning	1
2	141-2-1639-63500	Knob Volume	1
3	141-0-1129-20703	Cabinet Top Assy (Red)	1
3	141-0-1129-20704	Cabinet Top Assy (Black)	1
3	141-0-1129-20705	Cabinet Top Assy (White)	1
	Following the speakers are included in Cabinet Top		
	4-1519-71213	Speaker (300Ω) [SP102 & SP202]	2
4	4-1539-70724	Microphone [BM1]	1
5	141-2-4469-56000	Cushion Mic	1
6	141-2-1149-50300	Screen Speaker (Right) (Red, Black)	1
6	141-2-1149-50301	Screen Speaker (Right) (White)	1
7	141-2-1149-50400	Screen Speaker (Left) (Red, Black)	1
7	141-2-1149-50401	Screen Speaker (Left) (White)	1
8	4-1519-72560	Speaker (3.2Ω) [SP101 & SP201]	2
9	141-0-5519-08501	Gear Eject Assy	2
10	141-2-2719-18500	Holder Handle	2
11	141-0-1719-12103	Handle Assy (Red)	1
11	141-0-1719-12104	Handle Assy (Black)	1
11	141-0-1719-12105	Handle Assy (White)	1
12	141-2-8529-25201	Spring Lid Cassette	2
13	141-0-1249-41803	Lid Cassette A Complete (Red)	1
13	141-0-1249-41804	Lid Cassette A Complete (Black)	1
13	141-0-1249-41805	Lid Cassette A Complete (White)	1
14	141-0-1249-41903	Lid Cassette B Complete (Red)	1
14	141-0-1249-41904	Lid Cassette B Complete (Black)	1
14	141-0-1249-41905	Lid Cassette B Complete (White)	1
15	141-2-1129-42903	Cabinet Bottom (Red)	1
15	141-2-1129-42904	Cabinet Bottom (Black)	1
15	141-2-1129-42905	Cabinet Bottom (White)	1
16	4-2449-70650	Rod Antenna	1
17	141-2-3829-06700	Terminal Battery Anode	1
18	141-2-3829-20900	Spring Battery	1
19	141-2-3829-31300	Spring Battery	1
20	141-0-1339-14200	Lid Battery Assy (Red)	1
20	141-0-1339-14201	Lid Battery Assy (Black)	1
20	141-0-1339-14202	Lid Battery Assy (White)	1
21	141-2-3119-28300	Chassis Radio	1
22	4-2249-70302	Fine Tuner [FT1]	1
23	141-2-5519-03300	Roller Dial A	4
24	141-2-8259-04700	Roller Dial	1
25	141-2-5389-03400	Drum	1
26	141-2-8519-78000	Spring Stop	1
27	628-3-0911-00000	String 0.5	1
28	141-2-6219-06300	Lever Band Switch	1
29	141-2-7319-82300	Plate Band Switch	1
30	141-2-4469-52200	Cushion	1
31	141-2-4419-25200	Sheet	3
32	141-2-5119-14000	Pointer	1
33	141-2-1629-11500	Knob Band Select	2
34	141-2-3749-11600	Holder LED	1
35	141-2-2629-09300	Cover Volume	1
36	141-2-1649-43700	Knob Graphic EQ.	3
37	141-2-3679-33100	Plate Jack (Red)	1
37	141-2-3679-33101	Plate Jack (Black)	1
37	141-2-3679-33102	Plate Jack (White)	1
38	141-2-1629-11600	Knob Function	1
39	141-2-1659-64800	Knob Push EQ.	1
40	141-2-3529-49700	Spacer PCB	1
41	141-2-3779-23400	Post PCB 26	2
42	141-2-3779-23500	Post PCB 14.5	1
43	⚠ 4-2519-74232	Power Trans [T901]	1
44	141-2-1659-64900	Button Stop A	1
45	141-2-1659-65000	Button Play A	1
46	141-2-1659-65100	Button Rewind A	1
47	141-2-1659-65200	Button F.FWD A	1
48	141-2-1659-65300	Button Pause A	1
49	141-2-1659-65400	Button High Speed	1
50	141-2-1659-65500	Button Dubbing	1
51	141-2-1659-65600	Button Record B	1
52	141-2-1659-65700	Button Play B	1
53	141-2-1659-65800	Button Rewind B	1
54	141-2-1659-65900	Button F.FWD B	1
55	141-2-1659-66000	Button Pause B	1
56	141-2-1659-66100	Button Stop B	1
57	141-2-7319-82200	Plate Mono Stereo	1
58	141-2-6219-05300	Lever Band Switch	1
59	141-2-1639-62100	Knob Fine	1
61	141-0-1939-16670	Graphic Equalizer P.C.B. Assy	1
62	141-0-1939-16681	Amplifier P.C.B. Assy	1
63	141-0-1939-16631	Radio Tuner P.C.B. Assy	1
64	141-0-1939-16641	LED P.C.B. Assy	1
65	141-0-1939-16660	AMSS LED P.C.B. Assy	1
66	141-0-1939-16651	Power Supply P.C.B. Assy	1
71	141-2-4219-43000	Screw	8
72	143-3-1303-01011	Screw, Pan Hd. Tapp.-B, +M3.0x10	2
73	143-3-1303-01011	Screw, Pan Hd. Tapp.-B, +M3.0x10	1
74	141-2-4219-25800	Screw	2
75	143-3-1303-01011	Screw, Pan Hd. Tapp.-B, +M3.0x10	3
76	141-2-4219-12400	Screw	8
77	143-3-1702-00411	Screw, Bind Hd. Tapp.-B, +M2.0x4	12
78	143-3-1302-00411	Screw, Pan Hd. Tapp.-B, +M2.0x4	1
80	141-2-4219-14000	Screw	5
81	141-2-4219-29700	Screw	4
82	143-3-1303-01011	Screw, Pan Hd. Tapp.-B, +M3.0x10	1
83	141-2-4219-09601	Screw	2
84	143-3-1303-01011	Screw, Pan Hd. Tapp.-B, +M3.0x10	2
85	143-3-1303-03013	Screw, Pan Hd. Tapp.-B, +M3.0x30	1
86	143-3-1303-01811	Screw, Pan Hd. Tapp.-B, +M3.0x18	1
87	143-3-1303-01011	Screw, Pan Hd. Tapp.-B, +M3.0x10	4
88	143-3-1303-01018	Screw, Pan Hd. Tapp.-B, +M3.0x10 (Red, Black)	1
88	143-3-1303-01018	Screw, Pan Hd. Tapp.-B, +M3.0x10 (White)	1
89	143-3-1302-61011	Screw, Pan Hd. Tapp.-B, +M2.6x10	1
90	141-2-4579-00900	Washer Fiber	1

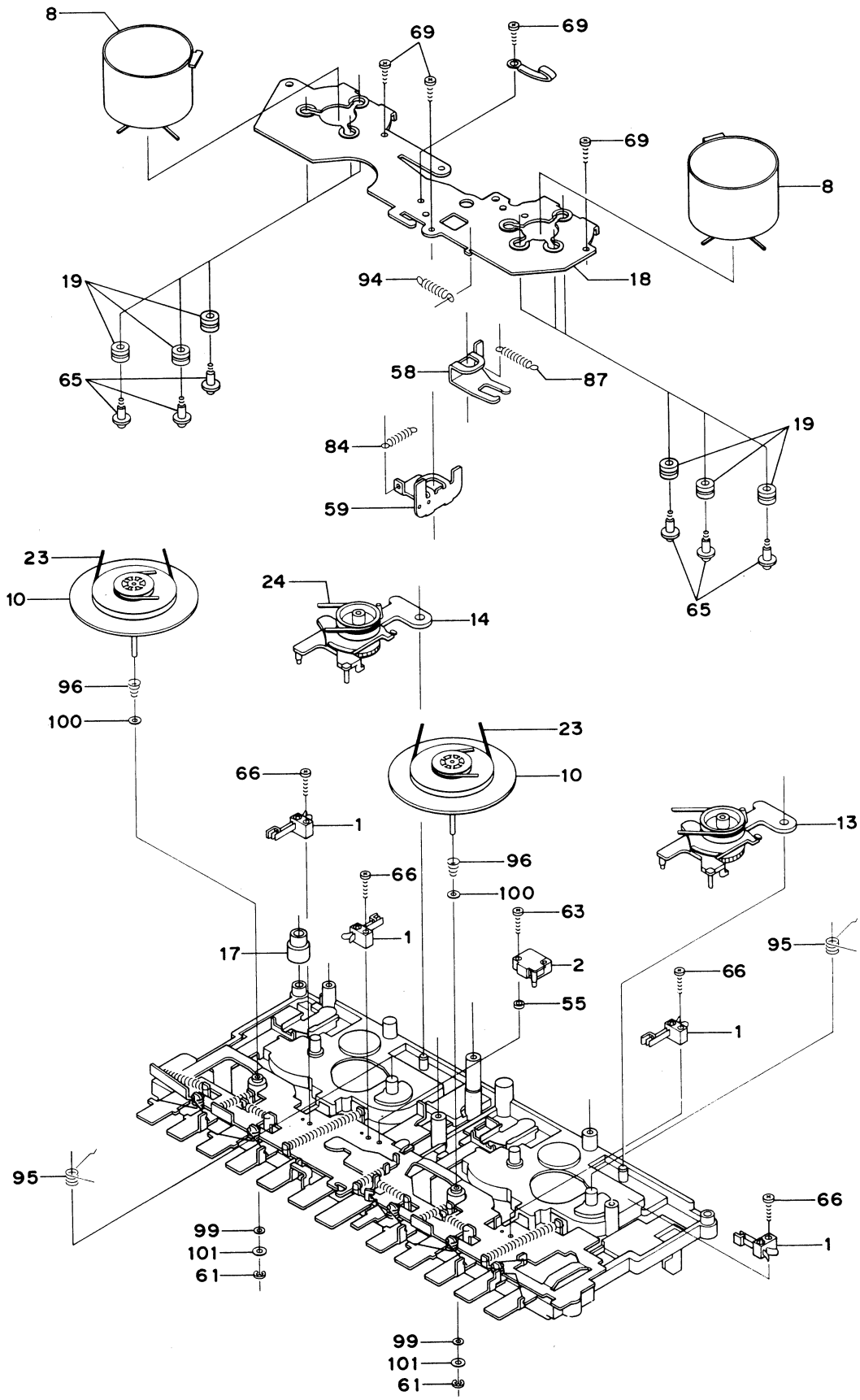
MECHANISM EXPLODED VIEW



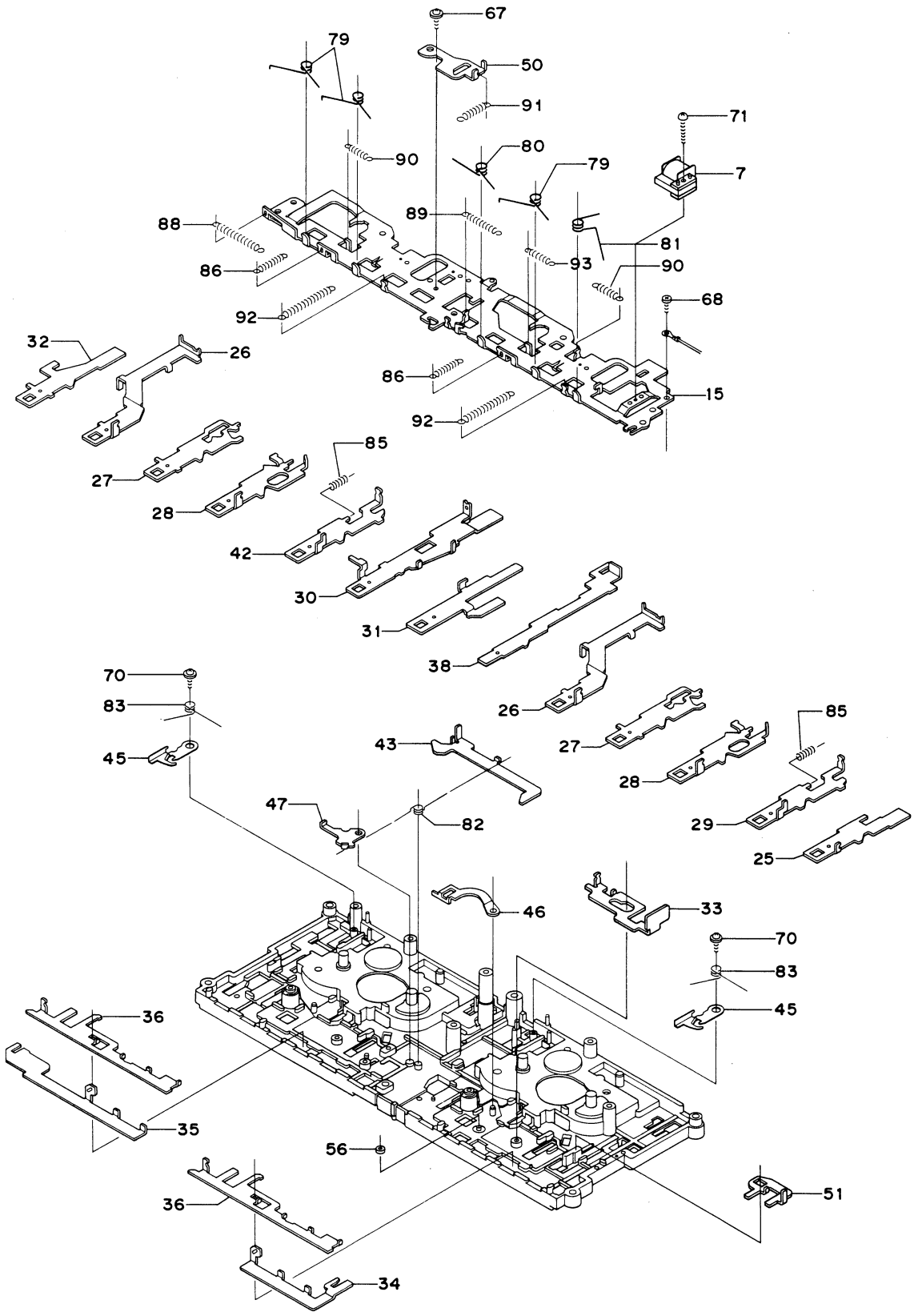
PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

MECHANISM EXPLODED VIEW (Continued)



MECHANISM EXPLODED VIEW (Continued)



MECHANISM PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	MECHANISM		
	141-2-4729-04100	Lug	1
	141-2-4729-07100	Wire Band	2
	141-2-4729-04100	Lug	1
C801	CD4-7-6250-0001V	Electrolytic 47μF 25V	1
C802	CD4-7-6250-0001V	Electrolytic 47μF 25V	1
	4-2359-79638	Connector 1P Assy	1
1	4-2319-74360	Leaf Switch (AMSS) [S307]	1
1	4-2319-74360	Leaf Switch (Motor A) [S308]	1
1	4-2319-74360	Leaf Switch (Motor B) [S309]	1
1	4-2319-74360	Leaf Switch (Power) [S311]	1
2	4-2319-78590	Lever Switch (Dubbing) [S310]	1
3	141-2-8219-36700	Guide Tape	1
4	4-2429-73070	Erase Head [HD3]	1
5	4-2429-73080	R/P Head [HD2]	1
6	4-2429-73081	Play Head [HD1]	1
7	4-2649-70610	Plunger [SL1]	1
8	4-5279-71501	Motor [M1 & M2]	2
9	141-0-3119-26301	Chassis Assy	1
10	141-0-5219-13200	Flywheel Complete	2
11	141-0-5319-09800	Fix Take-up Assy	2
12	141-0-5419-03201	Pinchroller Assy	2
13	141-0-5519-12800	Idler Assy	1
14	141-0-5519-13500	Idler Assy	1
15	141-2-3519-77200	Bracket Rod	1
16	141-2-3529-18100	Spacer Head	2
17	141-2-3529-50100	Spacer	1
18	141-2-3789-10800	Bracket Motor	1
19	141-2-4459-11800	Cushion Motor	6
20	141-2-5319-17400	Fix Supply Reel	2
21	141-2-5519-65200	Gear Take-up	2
22	141-2-5519-65400	Gear F.FWD	2
23	141-2-5649-27200	Belt Drive	2
24	141-2-5649-28800	Belt Wind	2
25	141-2-7319-71400	Rod Stop Eject Right	1
26	141-2-7319-71500	Rod Pause	2
27	141-2-7319-71600	Rod F.FWD	2
28	141-2-7319-71700	Rod Rewind	2
29	141-2-7319-71800	Rod Play	1
30	141-2-7319-71900	Rod Record	1
31	141-2-7319-72000	Rod Dubbing	1
32	141-2-7319-72200	Rod Stop Eject Left	1
33	141-2-7319-72300	Plate Lock AMSS	1
34	141-2-7319-72400	Plate Switct Motor Left	1
35	141-2-7319-72500	Plate Switct Motor Right	1
36	141-2-7319-72600	Plate Lock	2
37	141-2-7319-72800	Base Slide	1
38	141-2-7319-74400	Rod Speed Switch	1
39	141-2-7319-75300	Base Slide	1
40	141-2-7319-75400	Plate Lock Lid Right	1
41	141-2-7319-75500	Plate Lock Lid Left	1
42	141-2-7319-77200	Rod Play	1
43	141-2-7319-77400	Plate Amp Switch	1
44	141-2-7419-98500	Lever Sensor ASO	2
45	141-2-7419-99400	Lutch Pause	2
46	141-2-7419-99500	Lever Play	1
47	141-2-7419-99600	Lever Stopper Record	1
48	141-2-7419-99700	Lever Cassette Fix Left	1
49	141-2-7419-99800	Lever Cassette Fix Right	1
50	141-2-7419-99900	Lever Dubbing	1
51	141-2-7429-00100	Lever Switch AMSS	1
52	141-2-7429-00200	Lever ASO	2
53	141-2-7429-00300	Lever Cue Review	2
54	141-2-7439-49200	Arm Take-up	2
55	141-2-8259-00300	Spacer Brake	1
56	141-2-8259-13700	Roller Lock	1
57	141-2-8419-11700	Interlock Lever	1
58	141-2-8429-07700	Lever Speed Switch	1
59	141-2-8429-07900	Lever R/P Switch	1
60	112-3-1302-00012	E Ring, M2.0	2
61	141-2-4579-04400	E Ring	2
62	141-2-4219-05400	Screw Washer	2
63	101-3-1702-00711	Screw, Bind Hd., +M2.0x7	3
64	101-3-1702-00511	Screw, Bind Hd., +M2.0x5	4
65	141-2-4219-30100	Screw	6
66	143-3-1702-01211	Screw, Bind Hd. Tapp.-B, +M2.0x12	4
67	141-2-4219-42100	Screw	1
68	143-3-1702-00611	Screw, Bind Hd. Tapp.-B, +M2.0x6	1
69	143-3-1702-60811	Screw, Bind Hd. Tapp.-B, +M2.6x8	4
70	141-2-4219-13201	Screw Washer	2
71	101-3-1302-00711	Screw, Pan Hd., +M2.0x7	1
72	141-2-8559-15200	Spring Reel	2
73	141-2-8559-15400	Spring Supply	2
74	141-2-8529-30600	Spring Cassette Lock Right	1
75	141-2-8529-30700	Spring Cassette Lock Left	1
76	141-2-8529-30300	Spring Pinchroller	2
77	141-2-8529-32400	Spring Take-up	2
78	141-2-8559-14900	Spring Head	2
79	141-2-8529-30200	Spring Rod	3
80	141-2-8529-30100	Spring Rod Pause	1
81	141-2-8529-30900	Spring Rod Stop	1
82	141-2-8529-31000	Spring Stop Record	1
83	141-2-8529-30400	Spring Pause Lutch	2
84	141-2-8519-78601	Spring Slide Base	1
85	141-2-8549-33700	Spring Rod Base	2
86	141-2-8549-34800	Spring Lever ASO	2
87	141-2-8519-14300	Spring Lever Cassette Lid	1
88	141-2-8519-38700	Spring Lever Head	1
89	141-2-8519-03600	Spring Shut Off Lever	1
90	141-2-8549-37400	Spring Plate Motor	2
91	141-2-8549-04500	Spring Eject	1
92	141-2-8559-14300	Spring Base Slide	2
93	141-2-8549-34800	Spring Lever ASO	1
94	141-2-8519-01800	Spring Rewind Roller	1
95	141-2-8529-32300	Spring Arm Idler	2
96	141-2-8559-04700	Spring Pulley	2
97	141-2-4539-27601	Washer	4
98	141-2-4539-15700	Washer	4
99	141-2-4539-27603	Washer	2
100	141-2-4539-35500	Washer	2
101	141-2-4539-19800	Washer	2

NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

ELECTRICAL ADJUSTMENTS

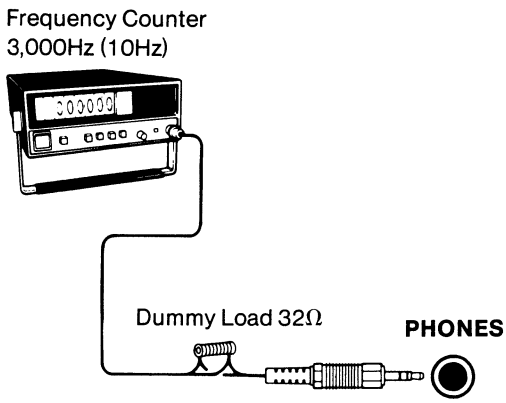
EQUIPMENT REQUIRED

- VTVM (2 sets)
- Frequency Counter
- Dummy Load (32Ω)
- Dualtrace Oscilloscope
- DC Constant-voltage Regulator
- Test Tapes
  - ‡ 3kHz Test Tape (Example: TEAC MTT-111) for Tape Speed Adjustment
  - ‡ 10kHz Test Tape (Example: TEAC MTT-114) for Head Azimuth Adjustment
- Alignment Tool

NORMAL TAPE SPEED ADJUSTMENT

Adjustment of A Side

1. Connect a frequency counter to the left or right channel output of the headphone jack as illustrated. Then, insert a 3kHz test tape (Example: TEAC MTT-111) into the cassette compartment.



2. Detach the Cabinet Bottom and adjust the tape speed by slowly turning the potentiometer inside the Motor of A side until the frequency counter reads 3,000Hz (±10Hz).

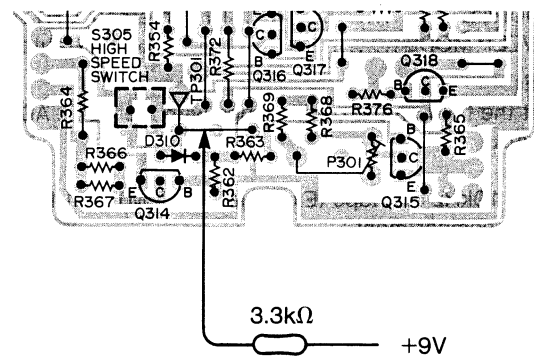
Adjustment of B Side

1. Adjust the potentiometer inside the Motor of B side by following the same procedure as in A side.

DOUBLE TAPE SPEED ADJUSTMENT

1. Connect the frequency counter as the same way as the normal speed adjustment.

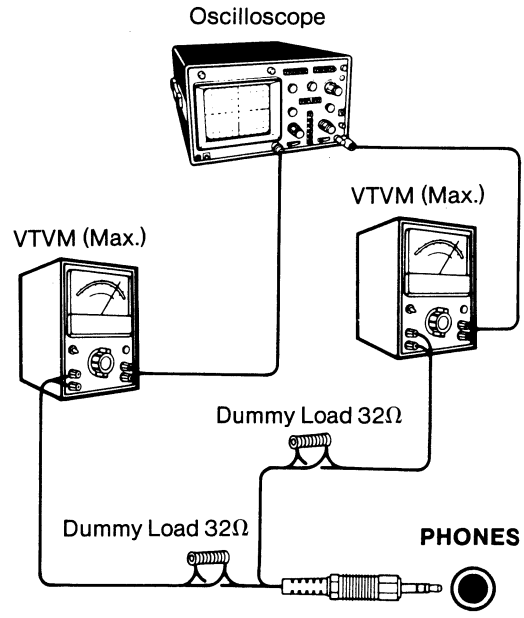
2. Apply a +9V to TP301 through a resistor 3.3kΩ. (Unit is set a Double Speed Mode.)



3. First play back the test tape on Tape A side and observe the figure of the Frequency Counter. Then play back the test tape on Tape B side and adjust the PT301 until the figure of the Frequency Counter shows ±20Hz against on Tape A.

HEAD AZIMUTH ADJUSTMENT

Detach the cassette compartment lid from the unit and connect a dualtrace oscilloscope and a VTVM to both channel outputs of the headphone jack as illustrated.



ELECTRICAL ADJUSTMENTS (Continued)

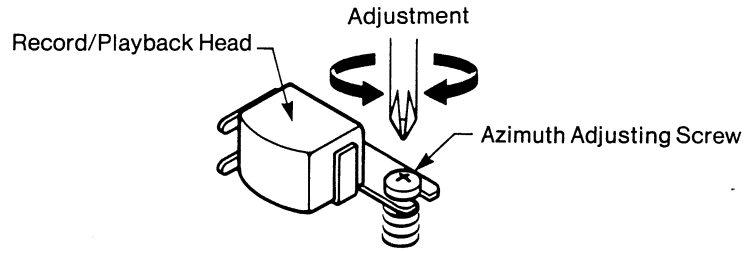
Then, set the dualtrace oscilloscope as follows:

- ‡ MODE ..... CHOP (chopped)
- ‡ SOURCE ..... INT (internal), CH1 or CH2
- ‡ SWEEP MODE ..... AUTO (automatic)

NOTE:
Adjust the field on the oscilloscope with the VOLT. ADJ. and TIME ADJ.

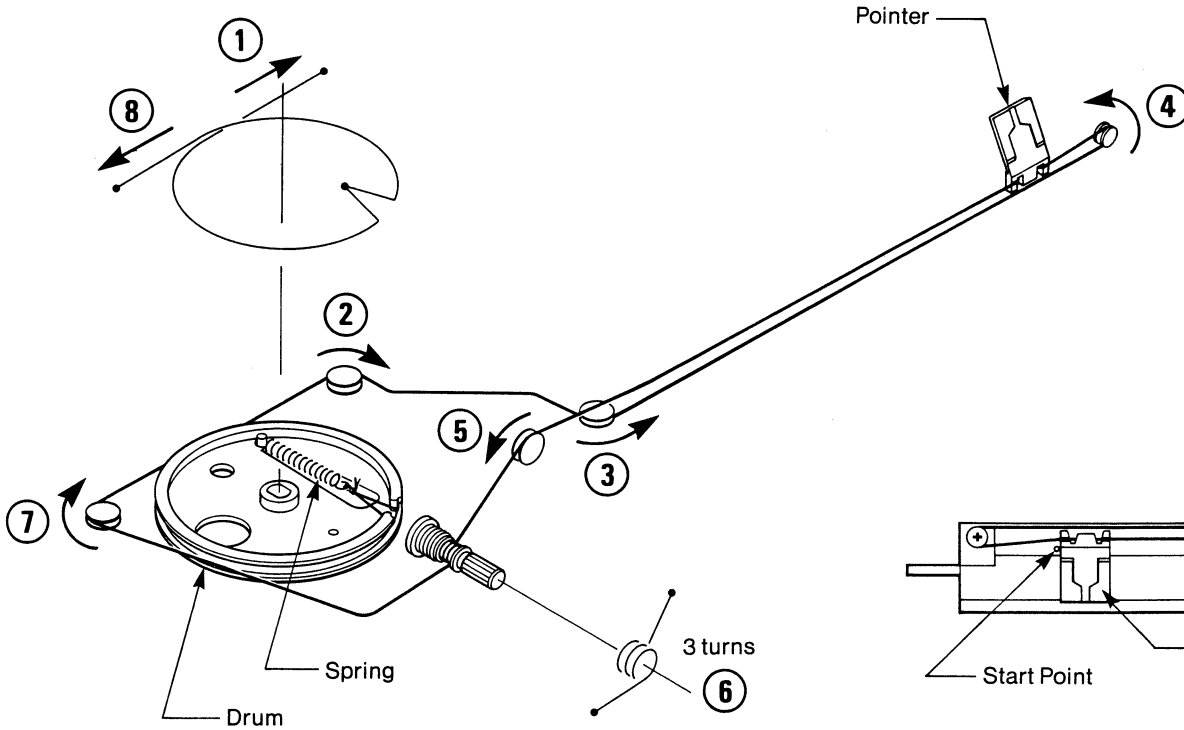
1. Insert a 10kHz test tape (Example: TEAC MTT-114) into the cassette compartment.

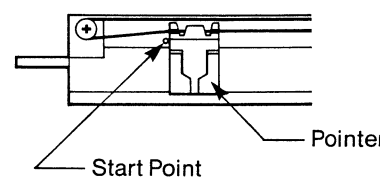
2. While playing back the test tape, turn the azimuth adjusting screw until the wave forms of the right and left channels are superimposed and set to optimum at maximum reading on the VTVM.

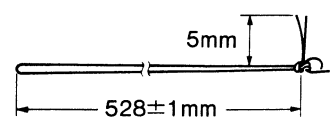


3. After the adjustment, secure the adjusting screw with paint or glue.

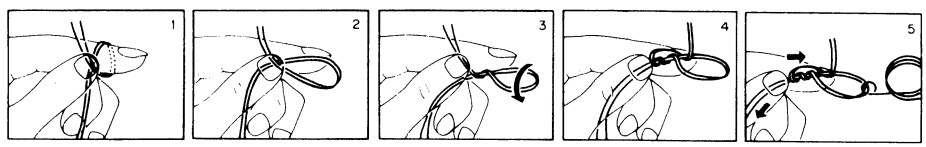
DIAL CORD STRINGING







CORD KNOTTING



TUNER ADJUSTMENT

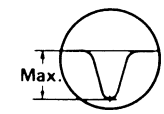
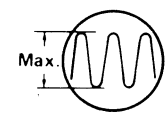
EQUIPMENT REQUIRED

- AM Standard Signal Generator
- FM Standard Signal Generator
- Generator Scope
- Loop Antenna
- Dummy Antenna (30Ω/10pF) for SW
- Ceramic Capacitor (10pF)
- Dummy Antenna (75Ω, unbalanced type) for FM
- Carbon Resistor (100kΩ)
- VTVM
- Oscilloscope
- Frequency Counter
- Dummy Load (32Ω)
- Alignment Tool
- Before performing the adjustment, set the switches and controls as follows:
  - ‡ Function Switch ..... RADIO
  - ‡ FM Mode Switch ..... MONO
  - ‡ Volume Control .... Arbitrary

NOTE:
Use an alignment tool with plastic grip for all adjustments.

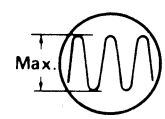
MW ALIGNMENT

Standard Test Frequency 400Hz and Modulation 30% at AM

Step	Alignment	Connections		Frequency of Signal Generator	Tuning Dial Setting	Adjustments	Remarks
		INPUT	OUTPUT				
1	Calibration of IF for MW	Connect loop antenna to output terminal of gene-scope. Place loop antenna by bar anttenna.	Connect input terminal of gene-scope to detector output terminal (TP6).	460kHz	Low End	T3	Obtain symmetrical curve and maximum amplitude. 
2	Calibration of Tuning Range	Connect loop antenna to output of AM signal generator. Place loop antenna 60cm away from bar antenna.	Connect VTVM with 32Ω dummy load and oscilloscope to PHONES Jack.	510kHz		T6	Obtain sine-wave of 400Hz and maximum amplitude. 
3				1,670kHz	High End	TC4	
4	Adjustment of Tracking			600kHz	600kHz	L4-1 (bar ant. coil)	
5				1,400kHz	1,400kHz	TC3 (PVC)	
6	Repeat the above steps until no further change is noted in any of the adjustments.						

LW ALIGNMENT

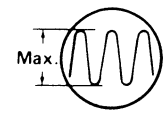
Standard Test Frequency 400Hz and Modulation 30% at AM

Step	Alignment	Connections		Frequency of Signal Generator	Tuning Dial Setting	Adjustments	Remarks
		INPUT	OUTPUT				
1	Calibration of Tuning Range	Connect loop antenna to output of AM signal generator. Place loop antenna 60cm away from bar antenna.	Connect VTVM with 32Ω dummy load and oscilloscope to PHONES jack.	145kHz	Low End	T7	Obtain sine-wave of 400Hz and maximum amplitude. 
2				300kHz	High End	TC5	
3	Adjustment of Tracking			160kHz	160kHz	L4-2 (bar ant. coil)	
4				280kHz	280kHz	TC2	
5	Repeat the above steps until no further change is noted in any of the adjustments.						

TUNER ADJUSTMENT (Continued)

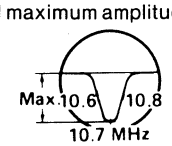
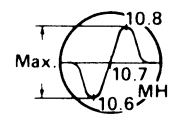
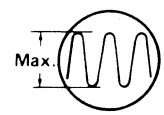
SW ALIGNMENT

Standard Test Frequency 400Hz and Modulation 30% at AM

Step	Alignment	Connections		Frequency of Signal Generator	Tuning Dial Setting	Adjustments	Remarks
		INPUT	OUTPUT				
1	Calibration of Tuning Range	Connect AM signal generator to antenna terminals (TP1 and TP2) through dummy antenna (30Ω/10pF).	Connect VTVM with 32Ω dummy load and oscilloscope to PHONES jack.	5.7MHz	Low End	T5	Obtain sine-wave of 400Hz and maximum amplitude. 
2				18.7MHz	High End	TC3	
3	Adjustment of Tracking			6.5MHz	6.5MHz	T4	
4				17.0MHz	17.0MHz	TC1	
5	Repeat the above steps until no further change is noted in any of the adjustments.						

FM ALIGNMENT

Standard test frequency 400Hz and deviation 22.5kHz

Step	Alignment	Connections		Frequency of Signal Generator	Tuning Dial Setting	Adjustments	Remarks
		INPUT	OUTPUT				
1	Calibration of IF	Place output of gene-scope to TP5 through capacitor (10pF).	Connect input terminal of gene-scope to detector output terminals (TP6).	10.7MHz	Low End	Turn T2 (blue core) fully counter-clockwise and then, adjust T1.	Obtain symmetrical curve and maximum amplitude. 
2						T2 (blue core)	Obtain **S** curve and maximum amplitude. 
3	Calibration of Tuning Range	Connect FM signal generator to antenna terminals (TP1 and TP2) through dummy antenna (75Ω, unbalanced type).	Connect VTVM with 32Ω dummy load and oscilloscope to PHONES jack.	87.45MHz		L2	Obtain sine-curve and maximum amplitude. 
4				108.35MHz	High End	TC2 (PVC)	
5	Adjustment of Tracking			90MHz	90MHz	L1	
6				106MHz	106MHz	TC1 (PVC)	
7	Repeat the above steps until no further change is noted in any of the adjustments.						

FM MPX (Multiplex) ADJUSTMENT

19kHz (V.C.O.) ADJUSTMENT

1. Before the adjustment, set the switches as follows:
   - FM Mode Switch ..... STEREO
   - Band Select Switch ..... FM

2. Connect a flequency counter to TP7 through a resistor 100kΩ.

3. Adjust the potentiometer (P1) until the oscillation frequency of IC3 becomes 19kHz (±20Hz).

P.C.BOARD PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	GRAPHIC EQUALIZER P.C.B. ASSY		
61	141-0-1939-16670	Graphic Equalizer P.C.B. Assy	1
VR701	4-2229-75790	Slide Volume (W-100kΩx2)	1
VR702	4-2229-75790	Slide Volume (W-100kΩx2)	1
VR703	4-2229-75790	Slide Volume (W-100kΩx2)	1
C115	CC3-3-1500-KE01R	Ceramic 330pF 50V ±10%	1
C116	CM2-7-2500-K00MV	Mylar 0.0027μF 50V ±10%	1
C117	CM1-2-3500-J00TV	Mylar 0.012μF 50V ±5%	1
C118	CM1-8-2500-K00MV	Mylar 0.0018μF 50V ±10%	1
C119	CM8-2-2500-K00MV	Mylar 0.0082μF 50V ±10%	1
C120	CM2-2-3500-J00TV	Mylar 0.022μF 50V ±5%	1
C215	CC3-3-1500-KE01R	Ceramic 330pF 50V ±10%	1
C216	CM2-7-2500-K00MV	Mylar 0.0027μF 50V ±10%	1
C217	CM1-2-3500-J00TV	Mylar 0.012μF 50V ±5%	1
C218	CM1-8-2500-K00MV	Mylar 0.0018μF 50V ±10%	1
C219	CM8-2-2500-K00MV	Mylar 0.0082μF 50V ±10%	1
C220	CM2-2-3500-J00TV	Mylar 0.022μF 50V ±5%	1
R118	401 031 6601	CARBON 4.7K JA 1/8W	1
R119	401 031 6601	CARBON 4.7K JA 1/8W	1
R120	401 032 4606	CARBON 6.8K JA 1/8W	1
R121	401 031 6601	CARBON 4.7K JA 1/8W	1
R122	401 031 6601	CARBON 4.7K JA 1/8W	1
R123	401 030 0709	CARBON 22K JA 1/8W	1
R124	401 029 5500	CARBON 18K JA 1/8W	1
R125	401 029 5500	CARBON 18K JA 1/8W	1
R126	401 030 9702	CARBON 33K JA 1/8W	1
R218	401 031 6601	CARBON 4.7K JA 1/8W	1
R219	401 031 6601	CARBON 4.7K JA 1/8W	1
R220	401 032 4606	CARBON 6.8K JA 1/8W	1
R221	401 031 6601	CARBON 4.7K JA 1/8W	1
R222	401 031 6601	CARBON 4.7K JA 1/8W	1
R223	401 030 0709	CARBON 22K JA 1/8W	1
R224	401 029 5500	CARBON 18K JA 1/8W	1
R225	401 029 5500	CARBON 18K JA 1/8W	1
R226	401 030 9702	CARBON 33K JA 1/8W	1
	AMPLIFIER P.C.B. ASSY		
62	141-0-1939-16681	Amplifier P.C.B. Assy	1
	141-2-3689-15100	Radiator IC	1
	143-3-1303-00811	Screw, Pan Hd. Tapp.-B, +M3.0x8	2
CN1	4-2369-76150	Plug 10P	1
CN2	4-2369-73672	Plug 2P	1
CN3	4-2369-75680	Plug 3P	1
CN4	4-2359-79545	Connector 4P Assy	1
J301	4-2352-01954	Pin Jack 2P (LINE/CD IN)	1
J302	4-2359-75701	Jack 5P With Switch (Headphone)	1
L101	4-2729-70910	Coil 33mH	1
L102	4-2729-70920	Coil 1.2mH	1
L201	4-2729-70910	Coil 33mH	1
L202	4-2729-70920	Coil 1.2mH	1
P301	4-2229-72960	Potentiometer (B-200Ω)	1
S302	4-2319-77590	Lever Switch (Function)	1
S303	4-2319-70598	Slide Switch (Record/Play)	1
S304	4-2319-75712	Push Switch (Continuouse Play)	1
S305	4-2319-73990	Leaf Switch High Speed)	1
S306	4-2319-75590	Slide Switch (Beat Cancel)	1
T301	4-2589-73090	OSC Trans	1
VR301	4-2229-76610	Volume (B-50kΩx2)	1
D101	212-5-7310-00102	Diode, GMB 01	1
D102	212-5-7310-00102	Diode, GMB 01	1
D201	212-5-7310-00102	Diode, GMB 01	1
D202	212-5-7310-00102	Diode, GMB 01	1
D301	4-2029-75171	Zener Diode, MTZ7.5JB	1
D302	202-5-9600-44610	Diode, DS 446	1
D304	212-5-7310-00102	Diode, GMB 01	1
D305	212-5-7310-00102	Diode, GMB 01	1
D306	212-5-7310-00102	Diode, GMB 01	1
D307	212-5-7310-00102	Diode, GMB 01	1
D308	212-5-7310-00102	Diode, GMB 01	1
D309	212-5-7310-00102	Diode, GMB 01	1
D310	212-5-7310-00102	Diode, GMB 01	1
D311	212-5-7310-00102	Diode, GMB 01	1
D312	212-5-7310-00102	Diode, GMB 01	1
D313	212-5-7310-00102	Diode, GMB 01	1
D314	212-5-7310-00102	Diode, GMB 01	1
D315	212-5-7310-00102	Diode, GMB 01	1
D316	202-5-2810-44210	Diode, DS 442	1
IC301	4-2069-74180	IC, TA 7739 P	1
IC302	206-5-1984-50510	IC, LA 4505	1
IC303	4-2069-71710	IC, M 51544 L	1
IC304	4-2069-72970	IC, TC 9167 P	1
Q101	203-5-4921-01270	Transistor, 2SD 1012	1
Q102	203-5-5000-53664	Transistor, 2SC 536	1
Q103	203-5-5000-53664	Transistor, 2SC 536	1
Q104	203-5-5000-53664	Transistor, 2SC 536	1
Q201	203-5-4921-01270	Transistor, 2SD 1012	1
Q202	203-5-5000-53664	Transistor, 2SC 536	1
Q203	203-5-5000-53664	Transistor, 2SC 536	1
Q204	203-5-5000-53664	Transistor, 2SC 536	1
Q301	203-5-5000-53664	Transistor, 2SC 536	1
Q302	203-5-4921-01270	Transistor, 2SD 1012	1
Q303	203-5-5083-33165	Transistor, 2SC 3331	1
Q304	203-5-5000-53664	Transistor, 2SC 536	1
Q305	203-5-4580-69860	Transistor, 2SB 698	1
Q306	203-5-5000-53664	Transistor, 2SC 536	1
Q307	203-5-5000-53664	Transistor, 2SC 536	1
Q308	203-5-4580-69860	Transistor, 2SB 698	1
Q309	203-5-5000-53664	Transistor, 2SC 536	1
Q310	203-5-5000-53664	Transistor, 2SC 536	1
Q311	203-5-5000-53664	Transistor, 2SC 536	1
Q312	203-5-5000-53664	Transistor, 2SC 536	1
Q313	203-5-6850-40060	Transistor, 2SD 400	1
Q314	203-5-5083-33165	Transistor, 2SC 3331	1
Q315	203-5-5083-33165	Transistor, 2SC 3331	1
Q316	203-5-5000-53664	Transistor, 2SC 536	1
Q317	203-5-5000-53664	Transistor, 2SC 536	1
Q318	203-5-4580-69860	Transistor, 2SB 698	1
C101	CC2-2-1500-KE01R	Ceramic 220pF 50V ±10%	1
C102	CC6-8-0500-JD01R	Ceramic 68pF 50V ±5%	1
C103	CC4-7-1500-KE01R	Ceramic 470pF 50V ±10%	1
C104	CC4-7-1500-KE01R	Ceramic 470pF 50V ±10%	1
C105	CD1-0-6160-0001V	Electrolytic 10μF 16V	1
C106	CD4-7-6100-0001V	Electrolytic 47μF 10V	1
C109	CM1-5-3500-K00SV	Mylar 0.015μF 50V ±10%	1
C110	CM1-5-3500-K00SV	Mylar 0.015μF 50V ±10%	1
C111	CI3-9-2160-NF01R	Boundary 0.0039μF 16V ±30%	1
C112	CD1-0-5500-0001V	Electrolytic 1μF 50V	1
C113	CC1-0-1500-KE01R	Ceramic 100pF 50V ±10%	1
C114	CD4-7-5250-0001V	Electrolytic 4.7μF 25V	1
C121	CC1-0-2500-KE01R	Ceramic 0.001μF 50V ±10%	1
C122	CD4-7-5250-0001V	Electrolytic 4.7μF 25V	1
C123	CM1-0-3500-K00SV	Mylar 0.01μF 50V ±10%	1
C124	CC3-3-2500-KE00C	Ceramic 0.0033μF 50V ±10%	1
C125	CM6-8-3500-J00TV	Mylar 0.068μF 50V ±5%	1
C126	CD1-0-5500-0001V	Electrolytic 1μF 50V	1
C127	CC1-0-2500-KE01R	Ceramic 0.001μF 50V ±10%	1
C128	CD4-7-6100-0001V	Electrolytic 47μF 10V	1

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description				Q'ty
C129	CC4-7-A500-KD01R	Ceramic	4.7pF	50V	±10%	1
C130	CI1-0-3160-NG01R	Boundary	0.01μF	16V	±30%	1
C131	CD1-0-7100-0006V	Electrolytic	100μF	10V		1
C132	CD1-0-8160-0006V	Electrolytic	1000μF	16V		1
C133	CM1-5-4500-J00TV	Mylar	0.15μF	50V	±5%	1
C134	CM1-5-3500-K00SV	Mylar	0.015μF	50V	±10%	1
C135	CC3-3-1500-KE01R	Ceramic	330pF	50V	±10%	1
C136	CC3-3-1500-KE01R	Ceramic	330pF	50V	±10%	1
C137	CD1-0-6160-0001V	Electrolytic	10μF	16V		1
C138	CD4-7-6100-0001V	Electrolytic	47μF	10V		1
C139	CD1-0-4500-0002V	Electrolytic	0.1μF	50V		1
C140	CM8-2-3500-J00TV	Mylar	0.082μF	50V	±5%	1
C141	CM3-9-3500-J00TV	Mylar	0.039μF	50V	±5%	1
C142	CC8-2-1500-KE01R	Ceramic	820pF	50V	±10%	1
C143	CD1-0-6160-0002V	Electrolytic	10μF	16V		1
C201	CC2-2-1500-KE01R	Ceramic	220pF	50V	±10%	1
C202	CC6-8-0500-JD01R	Ceramic	68pF	50V	±5%	1
C203	CC4-7-1500-KE01R	Ceramic	470pF	50V	±10%	1
C204	CC4-7-1500-KE01R	Ceramic	470pF	50V	±10%	1
C205	CD1-0-6160-0001V	Electrolytic	10μF	16V		1
C206	CD4-7-6100-0001V	Electrolytic	47μF	10V		1
C209	CM1-5-3500-K00SV	Mylar	0.015μF	50V	±10%	1
C210	CM1-5-3500-K00SV	Mylar	0.015μF	50V	±10%	1
C211	CI3-9-2160-NF01R	Boundary	0.0039μF	16V	±30%	1
C212	CD1-0-5500-0001V	Electrolytic	1μF	50V		1
C213	CC1-0-1500-KE01R	Ceramic	100pF	50V	±10%	1
C214	CD4-7-5250-0001V	Electrolytic	4.7μF	25V		1
C221	CC1-0-2500-KE01R	Ceramic	0.001μF	50V	±10%	1
C222	CD4-7-5250-0001V	Electrolytic	4.7μF	25V		1
C223	CM1-0-3500-K00SV	Mylar	0.01μF	50V	±10%	1
C224	CC3-3-2500-KE00C	Ceramic	0.0033μF	50V	±10%	1
C225	CM6-8-3500-J00TV	Mylar	0.068μF	50V	±5%	1
C226	CD1-0-5500-0001V	Electrolytic	1μF	50V		1
C227	CC1-0-2500-KE01R	Ceramic	0.001μF	50V	±10%	1
C228	CD4-7-6100-0001V	Electrolytic	47μF	10V		1
C229	CC4-7-A500-KD01R	Ceramic	4.7pF	50V	±10%	1
C230	CI1-0-3160-NG01R	Boundary	0.01μF	16V	±30%	1
C231	CD1-0-7100-0006V	Electrolytic	100μF	10V		1
C232	CD1-0-8160-0006V	Electrolytic	1000μF	16V		1
C233	CM1-5-4500-J00TV	Mylar	0.15μF	50V	±5%	1
C234	CM1-5-3500-K00SV	Mylar	0.015μF	50V	±10%	1
C235	CC3-3-1500-KE01R	Ceramic	330pF	50V	±10%	1
C236	CC3-3-1500-KE01R	Ceramic	330pF	50V	±10%	1
C237	CD1-0-6160-0001V	Electrolytic	10μF	16V		1
C238	CD4-7-6100-0001V	Electrolytic	47μF	10V		1
C239	CD1-0-4500-0002V	Electrolytic	0.1μF	50V		1
C240	CM8-2-3500-J00TV	Mylar	0.082μF	50V	±5%	1
C241	CM3-9-3500-J00TV	Mylar	0.039μF	50V	±5%	1
C242	CC8-2-1500-KE01R	Ceramic	820pF	50V	±10%	1
C243	CD1-0-6160-0002V	Electrolytic	10μF	16V		1
C301	CD4-7-6100-0001V	Electrolytic	47μF	10V		1
C302	CC1-0-2500-KE01R	Ceramic	0.001μF	50V	±10%	1
C303	CD2-2-6100-0001V	Electrolytic	22μF	10V		1
C304	CD2-2-763A-0006V	Electrolytic	220μF	6.3V		1
C305	CD2-2-7100-0006V	Electrolytic	220μF	10V		1
C306	CD1-0-7100-0006V	Electrolytic	100μF	10V		1
C307	CD2-2-7160-0006V	Electrolytic	220μF	16V		1
C308	CD4-7-7160-0006V	Electrolytic	470μF	16V		1
C309	CD2-2-8250-0006V	Electrolytic	2200μF	25V		1
C310	CD1-0-7100-0006V	Electrolytic	100μF	10V		1
C311	CC2-2-2500-KE00C	Ceramic	0.0022μF	50V	±10%	1
C312	CM1-8-3500-K00SV	Mylar	0.018μF	50V	±10%	1
C313	CC4-7-1500-KE01R	Ceramic	470pF	50V	±10%	1
C314	CD1-0-7100-0006V	Electrolytic	100μF	10V		1

Ref. No.	Part No.	Description				Q'ty
C315	CD1-0-5500-0001V	Electrolytic	1μF	50V		1
C316	CD4-7-5250-0001V	Electrolytic	4.7μF	25V		1
C317	CD2-2-7100-0006V	Electrolytic	220μF	10V		1
C318	CD2-2-6100-0001V	Electrolytic	22μF	10V		1
C319	CC1-0-2500-KE01R	Ceramic	0.001μF	50V	±10%	1
C320	CM3-9-2500-K00SV	Mylar	0.0039μF	50V	±10%	1
C321	CM2-2-3500-K00SV	Mylar	0.022μF	50V	±10%	1
C322	CP2-2-2101-J001V	Polypropylen	0.0022μF	100V	±5%	1
C323	CM1-0-3500-K00SV	Mylar	0.01μF	50V	±10%	1
C324	CM1-0-3500-K00SV	Mylar	0.01μF	50V	±10%	1
C325	CD2-2-5500-0001V	Electrolytic	2.2μF	50V		1
C326	CD4-7-4500-0001V	Electrolytic	0.47μF	50V		1
C327	CD1-0-7100-0006V	Electrolytic	100μF	10V		1
C328	CI2-2-2500-KE00R	Boundary	0.0022μF	50V	±10%	1
C329	CI1-0-3160-NG01R	Boundary	0.01μF	16V	±30%	1
C330	CD1-0-6160-0001V	Electrolytic	10μF	16V		1
C331	CD4-7-4500-0002V	Electrolytic	0.47μF	50V		1
C332	CD2-2-4500-0001V	Electrolytic	0.22μF	50V		1
C333	CD3-3-6100-0001V	Electrolytic	33μF	10V		1
C334	CI1-0-3160-NG01R	Boundary	0.01μF	16V	±30%	1
C335	CD2-2-7100-0006V	Electrolytic	220μF	10V		1
C336	CC2-2-3500-ZG00C	Ceramic	0.022μF	50V	+80,-20%	1
C337	CD2-2-7100-0006V	Electrolytic	220μF	10V		1
C338	CC2-2-3500-ZG00C	Ceramic	0.022μF	50V	+80,-20%	1
C341	CD2-2-6100-0001V	Electrolytic	22μF	10V		1
C342	CD2-2-6100-0001V	Electrolytic	22μF	10V		1
R101	401 031 7202	CARBON 47K JA 1/8W				1
R102	401 029 6002	CARBON 180K JA 1/8W				1
R103	401 031 9602	CARBON 56 JA 1/8W				1
R104	401 032 8703	CARBON 8.2K JA 1/8W				1
R105	401 028 3705	CARBON 10K JA 1/8W				1
R106	401 028 3705	CARBON 10K JA 1/8W				1
R107	401 031 2405	CARBON 3.9K JA 1/8W				1
R108	401 031 6601	CARBON 4.7K JA 1/8W				1
R109	401 031 6601	CARBON 4.7K JA 1/8W				1
R110	401 030 0709	CARBON 22K JA 1/8W				1
R111	401 030 0709	CARBON 22K JA 1/8W				1
R112	401 032 9205	CARBON 82K JA 1/8W				1
R113	401 030 0709	CARBON 22K JA 1/8W				1
R114	401 030 1300	CARBON 220K JA 1/8W				1
R115	401 030 5209	CARBON 270K JA 1/8W				1
R116	401 031 6601	CARBON 4.7K JA 1/8W				1
R117	401 028 3705	CARBON 10K JA 1/8W				1
R127	401 031 2405	CARBON 3.9K JA 1/8W				1
R128	401 028 4702	CARBON 1M JA 1/8W				1
R129	401 030 9207	CARBON 3.3K JA 1/8W				1
R130	401 030 0204	CARBON 2.2K JA 1/8W				1
R131	401 023 0709	CARBON 82 JA 1/4W				1
R132	401 030 0709	CARBON 22K JA 1/8W				1
R133	401 022 0809	CARBON 68 JA 1/4W				1
R134	401 028 3705	CARBON 10K JA 1/8W				1
R135	401 032 5108	CARBON 68K JA 1/8W				1
R136	401 028 3705	CARBON 10K JA 1/8W				1
R137	401 032 8703	CARBON 8.2K JA 1/8W				1
R138	401 032 1100	CARBON 56K JA 1/8W				1
R139	401 018 2800	CARBON 330 JA 1/4W				1
R140	401 028 3200	CARBON 1K JA 1/8W				1
R141	401 029 9102	CARBON 22 JA 1/8W				1
R142	401 028 3705	CARBON 10K JA 1/8W				1
R143	401 028 3705	CARBON 10K JA 1/8W				1
R144	401 028 5808	CARBON 11K JA 1/8W				1
R145	401 030 8200	CARBON 33 JA 1/8W				1
R201	401 031 7202	CARBON 47K JA 1/8W				1
R202	401 029 6002	CARBON 180K JA 1/8W				1

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
R203	401 031 9602	CARBON 56 JA 1/8W	1
R204	401 032 8703	CARBON 8.2K JA 1/8W	1
R205	401 028 3705	CARBON 10K JA 1/8W	1
R206	401 028 3705	CARBON 10K JA 1/8W	1
R207	401 031 2405	CARBON 3.9K JA 1/8W	1
R208	401 031 6601	CARBON 4.7K JA 1/8W	1
R209	401 031 6601	CARBON 4.7K JA 1/8W	1
R210	401 030 0709	CARBON 22K JA 1/8W	1
R211	401 030 0709	CARBON 22K JA 1/8W	1
R212	401 032 9205	CARBON 82K JA 1/8W	1
R213	401 030 0709	CARBON 22K JA 1/8W	1
R214	401 030 1300	CARBON 220K JA 1/8W	1
R215	401 030 5209	CARBON 270K JA 1/8W	1
R216	401 031 6601	CARBON 4.7K JA 1/8W	1
R217	401 028 3705	CARBON 10K JA 1/8W	1
R227	401 031 2405	CARBON 3.9K JA 1/8W	1
R228	401 028 4702	CARBON 1M JA 1/8W	1
R229	401 030 9207	CARBON 3.3K JA 1/8W	1
R230	401 030 0204	CARBON 2.2K JA 1/8W	1
R231	401 032 7805	CARBON 82 JA 1/8W	1
R232	401 030 0709	CARBON 22K JA 1/8W	1
R233	401 022 0809	CARBON 68 JA 1/4W	1
R234	401 028 3705	CARBON 10K JA 1/8W	1
R235	401 032 5108	CARBON 68K JA 1/8W	1
R236	401 028 3705	CARBON 10K JA 1/8W	1
R237	401 032 8703	CARBON 8.2K JA 1/8W	1
R238	401 032 1100	CARBON 56K JA 1/8W	1
R239	401 018 2800	CARBON 330 JA 1/4W	1
R240	401 028 3200	CARBON 1K JA 1/8W	1
R241	401 029 9102	CARBON 22 JA 1/8W	1
R242	401 028 3705	CARBON 10K JA 1/8W	1
R243	401 028 3705	CARBON 10K JA 1/8W	1
R244	401 028 5808	CARBON 11K JA 1/8W	1
R245	401 018 1605	CARBON 33 JA 1/4W	1
R301	401 031 6106	CARBON 470 JA 1/8W	1
R302	401 030 9702	CARBON 33K JA 1/8W	1
R303	401 030 0709	CARBON 22K JA 1/8W	1
R304	401 029 9706	CARBON 220 JA 1/8W	1
R305	401 030 0204	CARBON 2.2K JA 1/8W	1
R306	401 012 5708	CARBON 1K JA 1/4W	1
R307	401 028 3200	CARBON 1K JA 1/8W	1
R308	401 031 6601	CARBON 4.7K JA 1/8W	1
R309	401 029 9706	CARBON 220 JA 1/8W	1
R310	401 030 0204	CARBON 2.2K JA 1/8W	1
R311	401 031 3204	CARBON 390K JA 1/8W	1
R312	401 029 9706	CARBON 220 JA 1/8W	1
R313	401 030 0709	CARBON 22K JA 1/8W	1
R314	401 029 9706	CARBON 220 JA 1/8W	1
R315	401 030 0709	CARBON 22K JA 1/8W	1
R316	401 030 0709	CARBON 22K JA 1/8W	1
R317	401 016 6503	CARBON 2.2M JA 1/4W	1
R318	401 030 8200	CARBON 33 JA 1/8W	1
R319	401 032 4606	CARBON 6.8K JA 1/8W	1
R320	401 028 2104	CARBON 10 JA 1/8W	1
R321	401 019 9600	CARBON 47 JA 1/4W	1
R322	401 029 7900	CARBON 200 JA 1/8W	1
R323	401 028 3200	CARBON 1K JA 1/8W	1
R324	401 016 2604	CARBON 220 JA 1/4W	1
R325	401 030 0204	CARBON 2.2K JA 1/8W	1
R326	401 031 0203	CARBON 330K JA 1/8W	1
R327	401 030 8200	CARBON 33 JA 1/8W	1
R328	401 029 5005	CARBON 1.8K JA 1/8W	1
R329	401 029 5005	CARBON 1.8K JA 1/8W	1
R330	401 029 5005	CARBON 1.8K JA 1/8W	1
R331	401 029 5005	CARBON 1.8K JA 1/8W	1
R332	401 029 5005	CARBON 1.8K JA 1/8W	1
R333	401 029 5005	CARBON 1.8K JA 1/8W	1
R334	401 029 5005	CARBON 1.8K JA 1/8W	1
R345	401 029 6002	CARBON 180K JA 1/8W	1
R346	401 031 7202	CARBON 47K JA 1/8W	1
R347	401 028 3200	CARBON 1K JA 1/8W	1
R348	401 030 9207	CARBON 3.3K JA 1/8W	1
R349	401 030 3700	CARBON 270 JA 1/8W	1
R350	401 028 3705	CARBON 10K JA 1/8W	1
R351	401 028 3705	CARBON 10K JA 1/8W	1
R352	401 031 2801	CARBON 39K JA 1/8W	1
R353	401 029 5005	CARBON 1.8K JA 1/8W	1
R354	401 030 9702	CARBON 33K JA 1/8W	1
R355	401 030 0709	CARBON 22K JA 1/8W	1
R356	401 031 6106	CARBON 470 JA 1/8W	1
R357	401 018 4903	CARBON 33K JA 1/4W	1
R358	401 028 3200	CARBON 1K JA 1/8W	1
R359	401 030 9702	CARBON 33K JA 1/8W	1
R361	401 031 6106	CARBON 470 JA 1/8W	1
R362	401 030 0709	CARBON 22K JA 1/8W	1
R363	401 030 0709	CARBON 22K JA 1/8W	1
R364	4-2219-71430	LT Resistor 820Ω	1
R365	4-2219-71430	LT Resistor 820Ω	1
R366	401 029 0406	CARBON 150 JA 1/8W	1
R367	401 032 4002	CARBON 680 JA 1/8W	1
R368	401 030 8705	CARBON 330 JA 1/8W	1
R369	401 028 6607	CARBON 120 JA 1/8W	1
R370	401 030 9702	CARBON 33K JA 1/8W	1
R371	401 030 0709	CARBON 22K JA 1/8W	1
R372	401 016 4806	CARBON 22K JA 1/4W	1
R373	401 030 0709	CARBON 22K JA 1/8W	1
R374	401 030 0709	CARBON 22K JA 1/8W	1
R375	401 028 3705	CARBON 10K JA 1/8W	1
R376	401 029 5005	CARBON 1.8K JA 1/8W	1

RADIO TUNER P.C.B. ASSY

63	141-0-1939-16631	Radio Tuner P.C.B. Assy	1
BPF1	4-2539-71021	Band Pass Filter	1
CF1	4-2539-70881	Ceramic Filter	1
CF2	4-2539-70686	Mech Filter	1
CF3	4-2539-70881	Ceramic Filter	1
CN4	4-2369-75100	Plug 4P	1
CN5	4-2369-74890	Plug 2P	1
L1	4-2599-70810	RF Coil	1
L2	4-2589-71960	FM OSC Trans	1
L3	4-2532-00040	Choke Coil 1MHz	1
L4	4-2579-71482	Bar Antenna	1
P1	4-2229-73060	Potentiometer	1
PVC1	4-2249-70791	Variable Condenser	1
SW1	4-2319-75800	Slide Switch (Band)	1
SW2	4-2319-78230	Switct Slide (Mode)	1
T1	4-2569-71631	IFT FM	1
T2	4-2569-71340	IFT FM	1
T3	4-2569-71353	IFT AM	1
T4	4-2579-70723	Antenna Coil Switch	1
T5	4-2589-71422	OSC Trans SW	1
T6	4-2589-71413	OSC Trans MW	1
T7	4-2589-71402	OSC Trans LW	1
TC1	4-2249-70290	Trimmer Condenser	1
TC2	4-2249-70350	Trimmer	1
TC3	4-2249-70290	Trimmer Condenser	1
TC4	4-2249-70290	Trimmer Condenser	1

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description				Q'ty
TC5	4-2249-70350	Trimmer				1
W2	4-2439-73000	Wire 2P Assy				1
D1	4-2029-71440	Diode, 1SS 95				1
IC1	4-2069-74790	IC, BA 4412				1
IC2	4-2069-72964	IC, BA 4236 L				1
IC3	4-2069-72801	IC, BA 1335				1
Q1	4-2039-71200	Transistor, 2SC 2063				1
C1	CC5-6-A500-KD01R	Ceramic	5.6pF	50V	±10%	1
C2	CC1-8-0500-JD01R	Ceramic	18pF	50V	±5%	1
C3	CI1-0-3160-NG01R	Boundary	0.01μF	16V	±30%	1
C4	CC1-0-2500-KE01R	Ceramic	0.001μF	50V	±10%	1
C5	CI1-0-3160-NG01R	Boundary	0.01μF	16V	±30%	1
C6	CC2-0-0500-JCH1R	Ceramic	20pF	50V	±5%	1
C7	CC1-5-0500-JD01R	Ceramic	15pF	50V	±5%	1
C8	CC4-7-A500-KD01R	Ceramic	4.7pF	50V	±10%	1
C9	CI1-0-3160-NG01R	Boundary	0.01μF	16V	±30%	1
C10	CI2-2-3160-NG00R	Boundary	0.022μF	16V	±30%	1
C11	CD1-0-6160-0001V	Electrolytic	10μF	16V		1
C12	CI2-2-3160-NG00R	Boundary	0.022μF	16V	±30%	1
C13	CI1-0-3160-NG01R	Boundary	0.01μF	16V	±30%	1
C14	CI4-7-3250-KF00C	Boundary	0.047μF	25V	±10%	1
C15	CI2-2-3160-NG00R	Boundary	0.022μF	16V	±30%	1
C16	CC1-5-0500-JD01R	Ceramic	15pF	50V	±5%	1
C17	CI1-0-3160-NG01R	Boundary	0.01μF	16V	±30%	1
C18	CC1-2-0500-JD01R	Ceramic	12pF	50V	±5%	1
C19	CC2-0-0500-JD01R	Ceramic	20pF	50V	±5%	1
C20	CI2-2-3160-NG00R	Boundary	0.022μF	16V	±30%	1
C21	CC1-0-0500-JD01R	Ceramic	10pF	50V	±5%	1
C22	CC6-8-0500-JD01R	Ceramic	68pF	50V	±5%	1
C23	CP3-1-2101-J002V	Polypropylen	0.0031μF	100V	±5%	1
C24	CP3-6-1101-J002V	Polypropylen	360pF	100V	±5%	1
C25	CP2-4-1101-J002V	Polypropylen	240pF	100V	±5%	1
C26	CC8-2-A500-KD01R	Ceramic	8.2pF	50V	±10%	1
C27	CC1-5-0500-JD01R	Ceramic	15pF	50V	±5%	1
C28	CC1-8-1500-KE01R	Ceramic	180pF	50V	±10%	1
C29	CC4-7-A500-KD01R	Ceramic	4.7pF	50V	±10%	1
C30	CI2-2-3160-NG00R	Boundary	0.022μF	16V	±30%	1
C31	CD1-0-5500-0001V	Electrolytic	1μF	50V		1
C32	CI4-7-3250-KF00C	Boundary	0.047μF	25V	±10%	1
C33	CP6-8-1101-J002V	Polypropylen	680pF	100V	±5%	1
C34	CD2-2-4500-0001V	Electrolytic	0.22μF	50V		1
C35	CD4-7-4500-0001V	Electrolytic	0.47μF	50V		1
C36	CD1-0-5500-0001V	Electrolytic	1μF	50V		1
C37	CI1-0-3160-NG01R	Boundary	0.01μF	16V	±30%	1
C38	CI1-0-3160-NG01R	Boundary	0.01μF	16V	±30%	1
C39	CD1-0-4500-0001V	Electrolytic	0.1μF	50V		1
C40	CD1-0-4500-0001V	Electrolytic	0.1μF	50V		1
C41	CI1-0-3160-NG01R	Boundary	0.01μF	16V	±30%	1
C42	CI1-0-3160-NG01R	Boundary	0.01μF	16V	±30%	1
C43	CD1-0-7100-0001V	Electrolytic	100μF	10V		1
C44	CI2-2-3160-NG00R	Boundary	0.022μF	16V	±30%	1
C45	CD4-7-7100-0006V	Electrolytic	470μF	10V		1
C46	CC1-0-1500-KE01R	Ceramic	100pF	50V	±10%	1
C47	CC1-5-0500-JD01R	Ceramic	15pF	50V	±5%	1
C48	CC1-0-0500-DD00C	Ceramic	10pF	50V	±0.5%	1
R1	401 028 2104	CARBON 10 JA 1/8W				1
R2	401 031 0203	CARBON 330K JA 1/8W				1
R3	401 018 5801	CARBON 330K JA 1/4W				1
R4	401 018 5801	CARBON 330K JA 1/4W				1
R6	401 030 9207	CARBON 3.3K JA 1/8W				1
R7	401 028 4702	CARBON 1M JA 1/8W				1
R8	401 016 3809	CARBON 2.2K JA 1/4W				1
R9	401 028 2104	CARBON 10 JA 1/8W				1
R10	401 031 3907	CARBON 4.7 JA 1/8W				1

Ref. No.	Part No.	Description				Q'ty
R11	401 029 1502	CARBON 15K JA 1/8W				1
R12	401 028 3200	CARBON 1K JA 1/8W				1
R13	401 031 6106	CARBON 470 JA 1/8W				1
R14	401 030 9207	CARBON 3.3K JA 1/8W				1
R15	401 030 9207	CARBON 3.3K JA 1/8W				1
R16	401 030 0204	CARBON 2.2K JA 1/8W				1
R17	401 030 0204	CARBON 2.2K JA 1/8W				1
R18	401 030 9702	CARBON 33K JA 1/8W				1
R19	401 030 9702	CARBON 33K JA 1/8W				1
R20	401 031 1903	CARBON 390 JA 1/8W				1
R21	401 012 4503	CARBON 100 JA 1/4W				1
R22	401 031 5505	CARBON 47 JA 1/8W				1
R23	401 028 3200	CARBON 1K JA 1/8W				1
R24	401 028 3705	CARBON 10K JA 1/8W				1
R25	401 030 2109	CARBON 24 JA 1/8W				1
R26	401 032 4002	CARBON 680 JA 1/8W				1
R27	401 028 3200	CARBON 1K JA 1/8W				1
R28	401 028 3200	CARBON 1K JA 1/8W				1
	LED P.C.B. ASSY					
64	141-0-1939-16641	LED P.C.B. Assy				1
CN5	4-2359-79890	Connector 2P Assy				1
D11	4-2029-75270	LED, SLB 55 VR 3 (FM Stereo)				1
	AMSS P.C.B. ASSY					
65	141-0-1939-16660	AMSS LED P.C.B. Assy				1
S301	4-2319-75560	Touch Switch				1
CN12	4-2359-78357	Connector 10P Assy				1
D303	DYY--LA-4-01VP-	LED, LA 401 VP				1
	POWER SUPPLY P.C.B. ASSY					
66	141-0-1939-16651	Power Supply P.C.B. Assy				1
	141-2-4729-07100	Wire Band				3
F901	⚠ 4-2349-70360	Fuse T1.25A				1
FH01	4-2352-01940	Fuse Clip				2
J901	⚠ 4-2359-75682	AC DC Power Socket				1
S901	⚠ 4-2319-75773	Rotary Switch				1
CN3	4-2359-79731	Connector 2P Assy				1
D901	202-5-2540-13552	Diode, DS 135				1
D902	202-5-2540-13552	Diode, DS 135				1
D903	202-5-2540-13552	Diode, DS 135				1
D904	202-5-2540-13552	Diode, DS 135				1
C901	CC2-2-3500-ZG00C	Ceramic	0.022μF	50V	+80,-20%	1
C902	CC2-2-3500-ZG00C	Ceramic	0.022μF	50V	+80,-20%	1
C903	CC2-2-3500-ZG00C	Ceramic	0.022μF	50V	+80,-20%	1
C904	CC2-2-3500-ZG00C	Ceramic	0.022μF	50V	+80,-20%	1

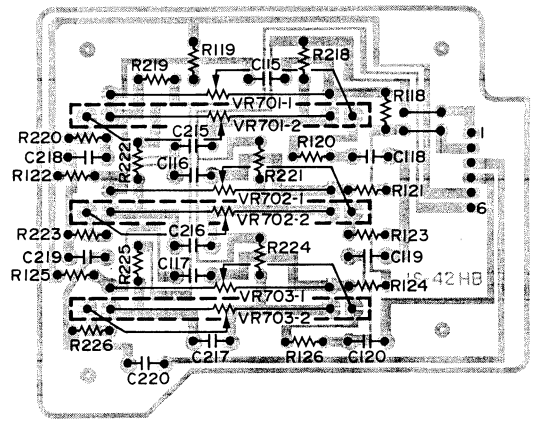
NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

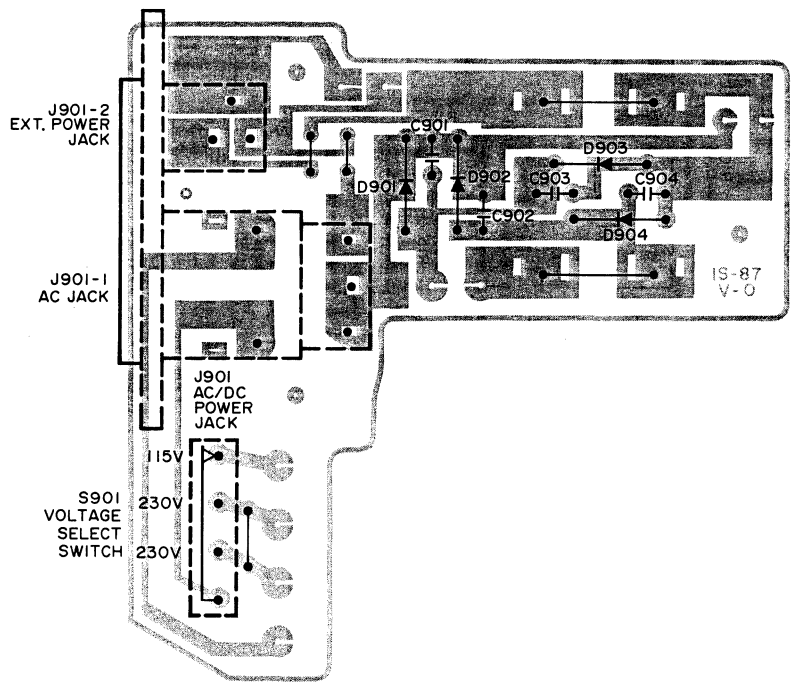
PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

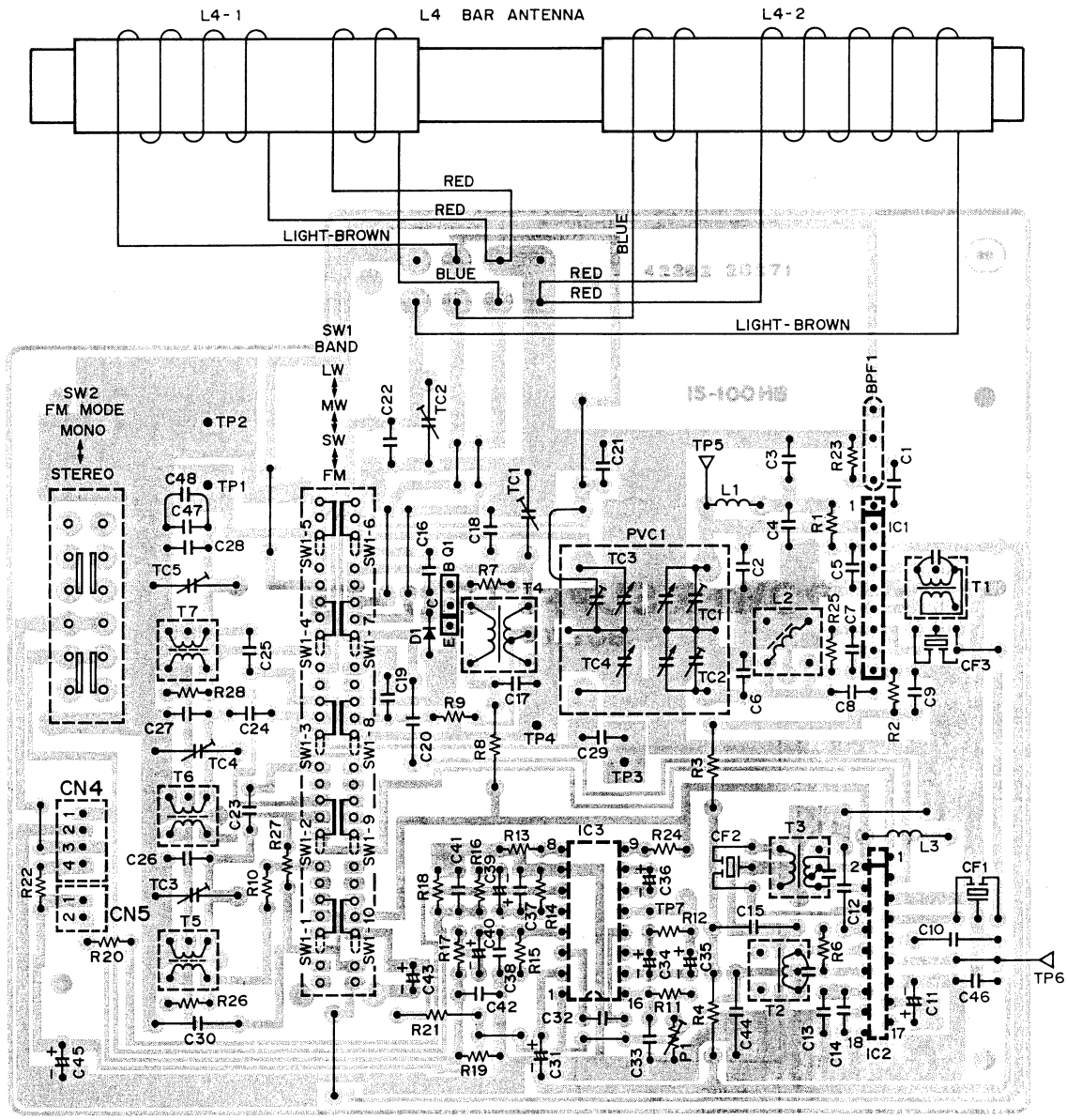
GRAPHIC EQUALIZER P.C.BOARD
(BOTTOM VIEW)



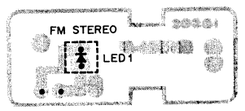
POWER SUPPLY P.C.BOARD
(BOTTOM VIEW)



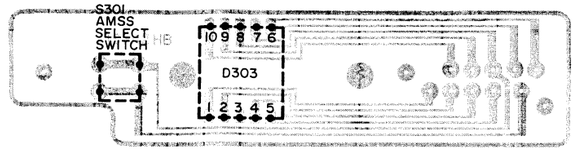
RADIO TUNER P.C.BOARD
(BOTTOM VIEW)



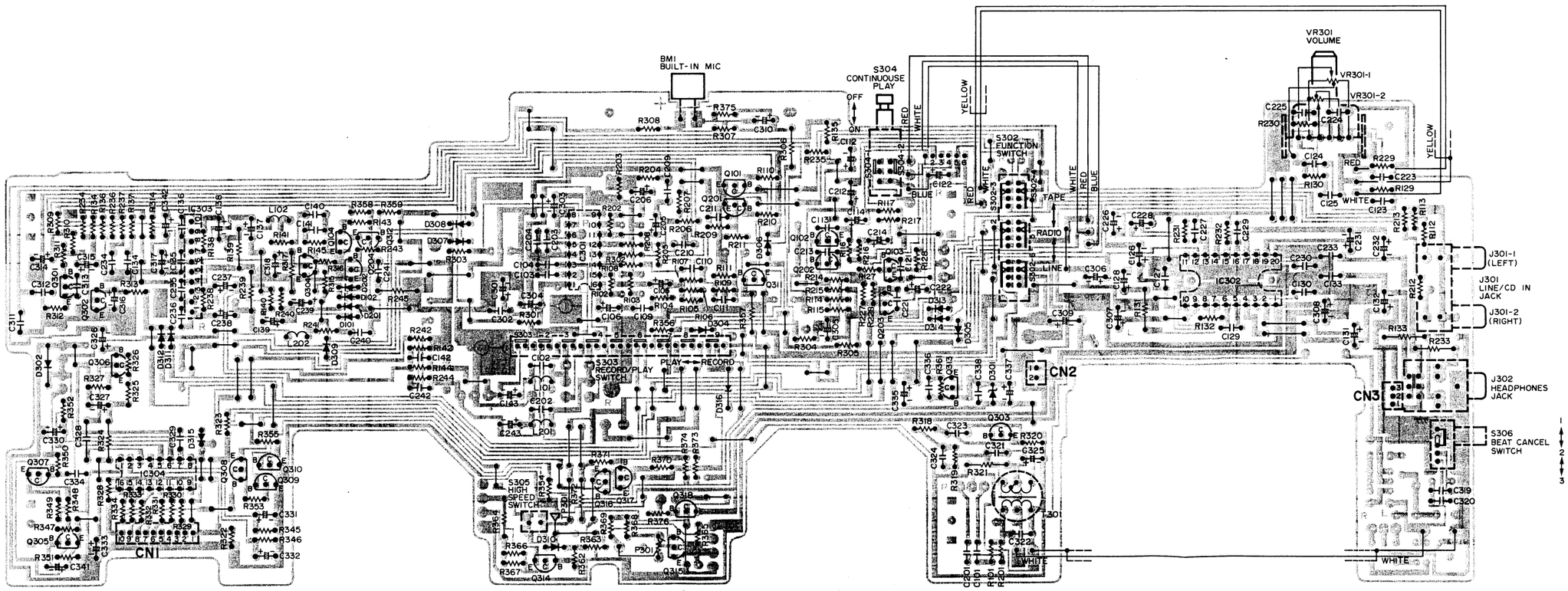
LED P.C.BOARD
(BOTTOM VIEW)



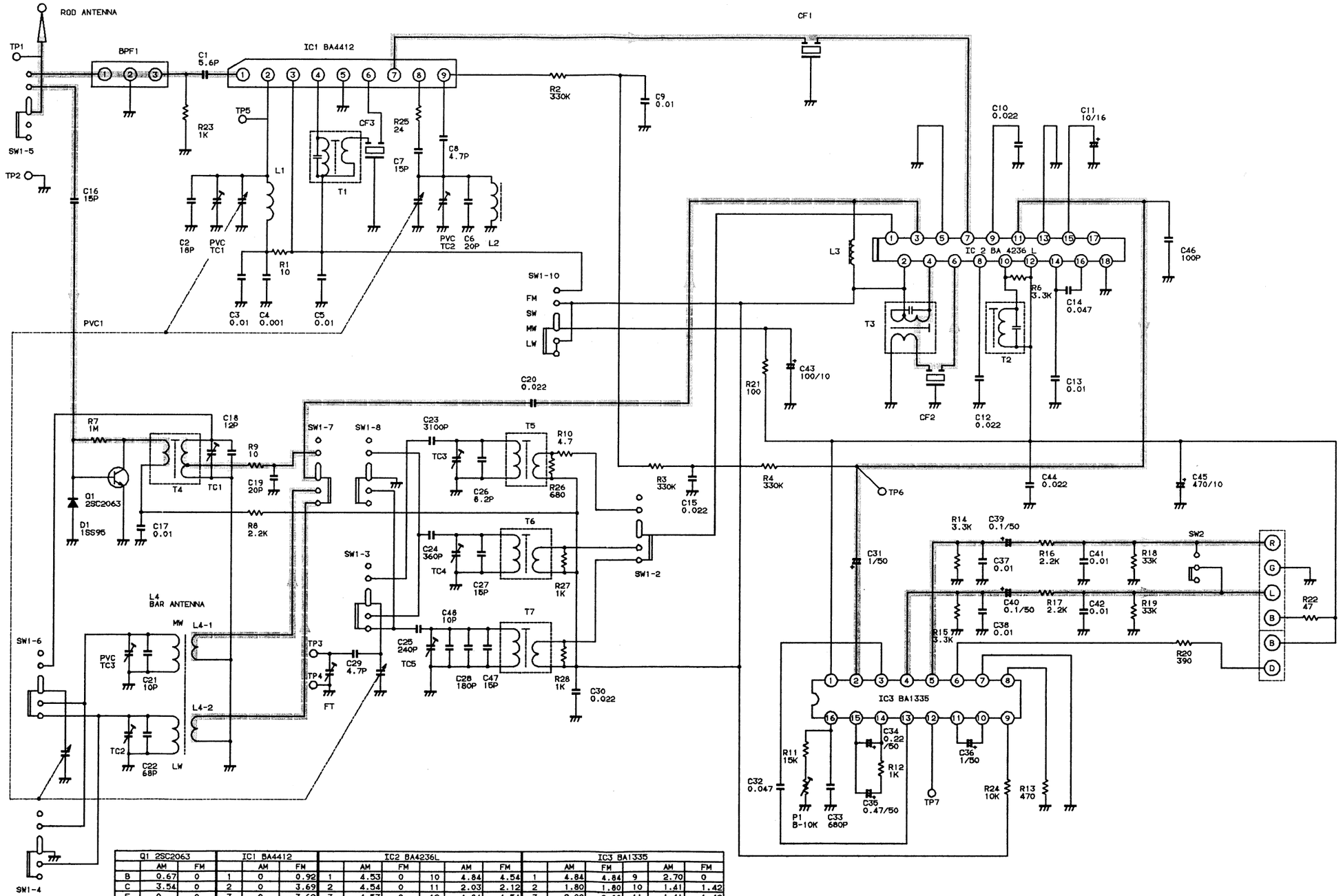
AMSS LED P.C.BOARD
(BOTTOM VIEW)



AMPLIFIER P.C.BOARD
(BOTTOM VIEW)



SCHEMATIC DIAGRAM (Tuner)



Q1 2SC2063		
	AM	FM
B	0.67	0
C	3.54	0
E	0	0

IC1 BA4412		
	AM	FM
1	0	0.92
2	0	3.69
3	0	3.69
4	0	3.72
5	0	0
6	0	3.69
7	0	2.94
8	0	3.65
9	0	1.95

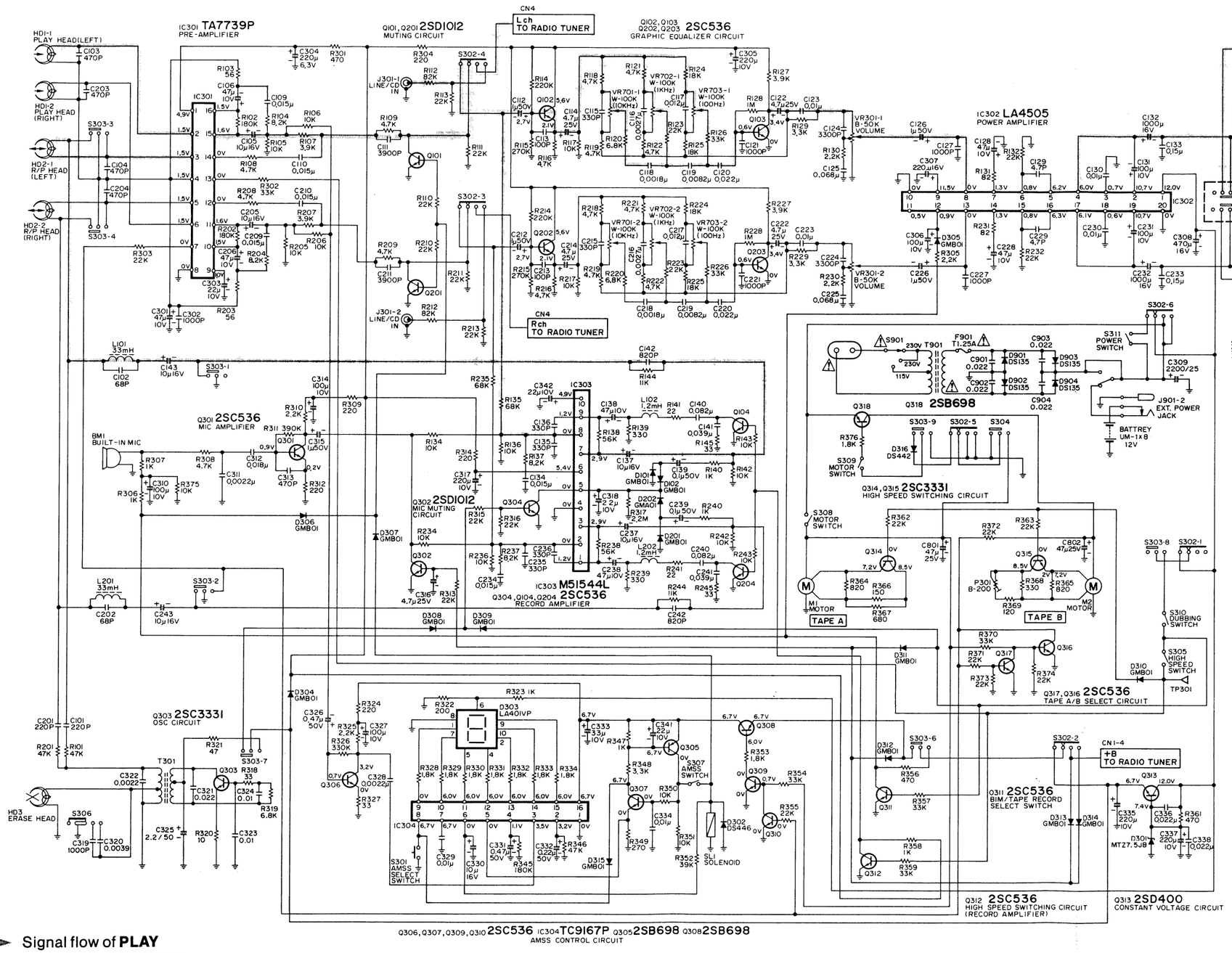
IC2 BA4236L					
	AM	FM		AM	FM
1	4.53	0	10	4.84	4.54
2	4.54	0	11	2.03	2.12
3	4.53	0	12	4.84	4.54
4	4.54	0	13	0	0
5	0	0	14	3.32	3.02
6	3.91	3.43	15	0	0
7	3.91	3.43	16	1.34	1.35
8	3.91	3.43	17	0	0
9	3.91	3.61	18	0	0

IC3 BA1335					
	AM	FM		AM	FM
1	4.84	4.84	9	2.70	0
2	1.80	1.80	10	1.41	1.42
3	2.00	2.00	11	1.41	1.42
4	2.42	2.43	12	0	1.09
5	2.46	2.46	13	1.42	1.43
6	3.32	3.07	14	1.42	1.43
7	0	0	15	1.42	1.43
8	0.28	0.28	16	2.80	2.07

Signal flow of **FM**

Signal flow of **AM**

SCHEMATIC DIAGRAM (Amplifier)



Signal flow of **PLAY**

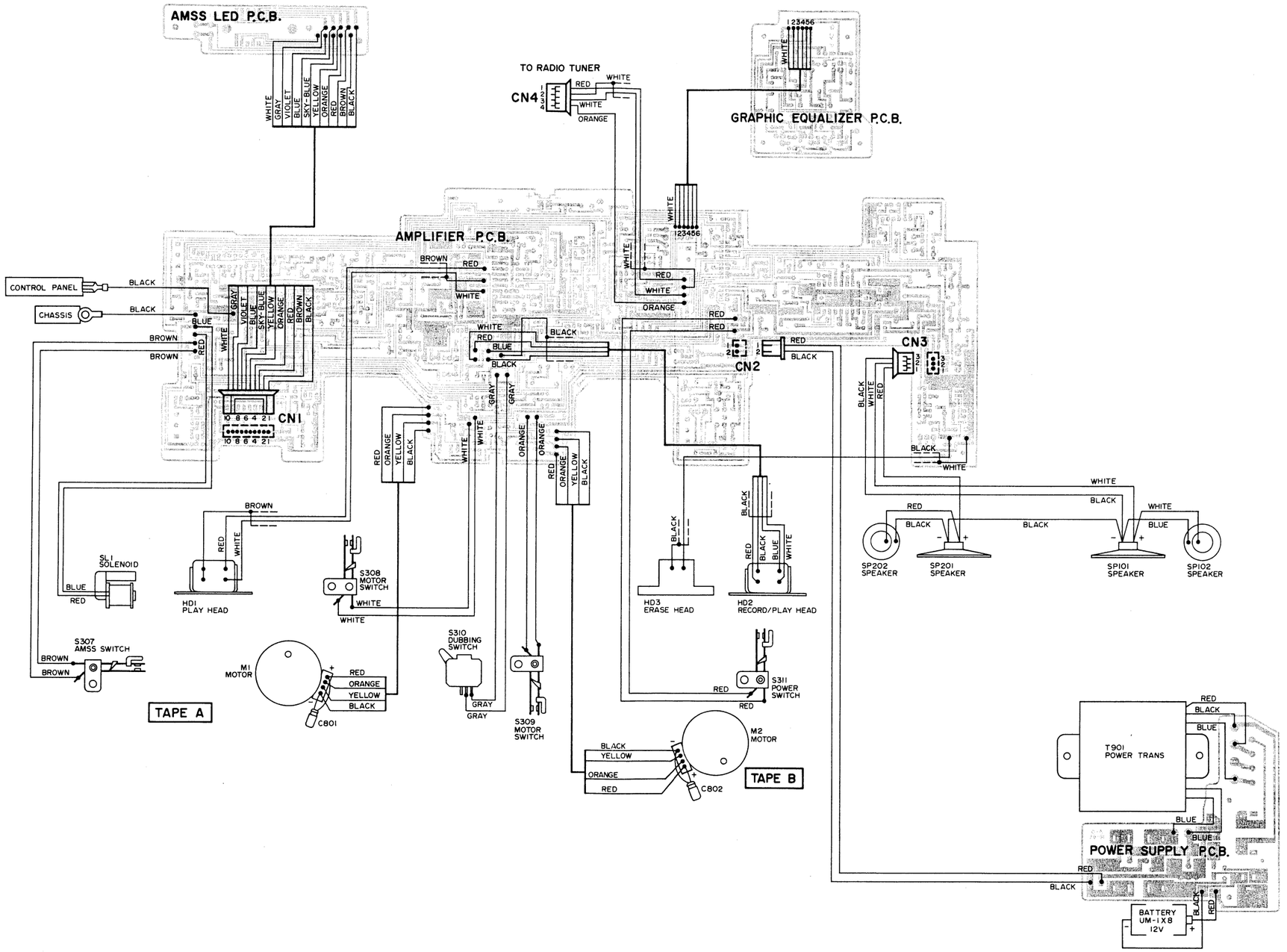
Signal flow of **RECORD**

No.	Name	Position	No.	Name	Position
SW1	BAND Switch	AM	S306	BEAT CANCEL Switch	1
SW2	FM MODE Switch	STEREO	S307	AMSS Switch	OFF
			S308	MOTOR Switch	OFF
S301	AMSS SELECT Switch	OFF	S309	MOTOR Switch	OFF
S302	FUNCTION Switch	TAPE	S310	DUBBING Switch	OFF
S303	RECORD/PLAY Switch	PLAY	S311	POWER Switch	OFF
S304	CONTINUOUS PLAY Switch	OFF			
S305	HIGH SPEED Switch	OFF	S901	VOLTAGE SELECT Switch	230V

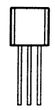
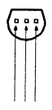
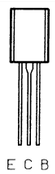
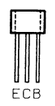
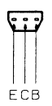
PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.
Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

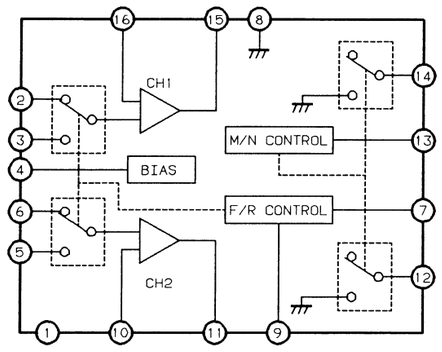
WIRING DIAGRAM



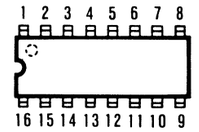
IC & TRANSISTOR LEAD IDENTIFICATION

TRANSISTOR	FRONT VIEW	BOTTOM VIEW
2SB 698 2SC 536 2SC 3331		
2SD 400		
2SC 2063		
2SD 1012		
TERMINAL NAME		
B → BASE C → COLLECTOR E → EMITTER		

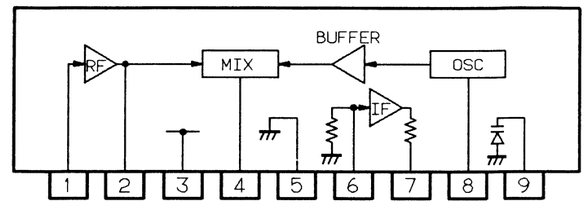
TA7739P BLOCK DIAGRAM



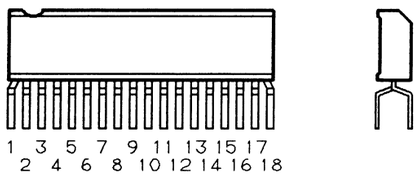
TA7739P
BA1335 } **BOTTOM VIEW**



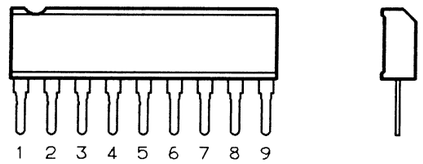
BA4412 BLOCK DIAGRAM



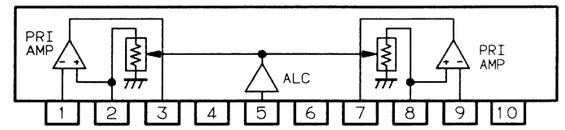
BA4236L FRONT/SIDE VIEWS



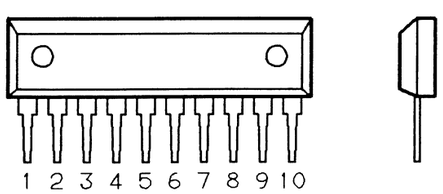
BA4412 FRONT/SIDE VIEWS



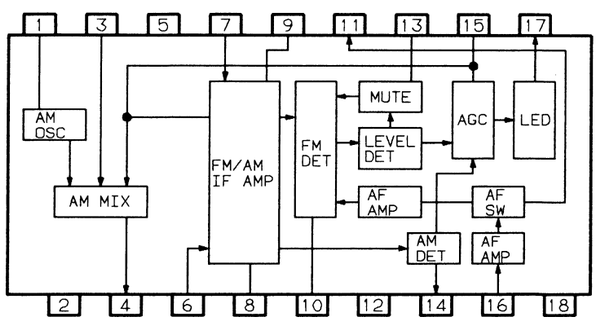
M51544L BLOCK DIAGRAM



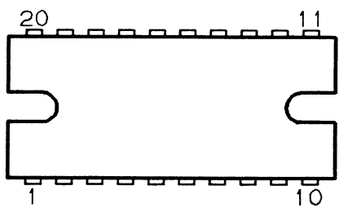
M51544L FRONT/SIDE VIEWS



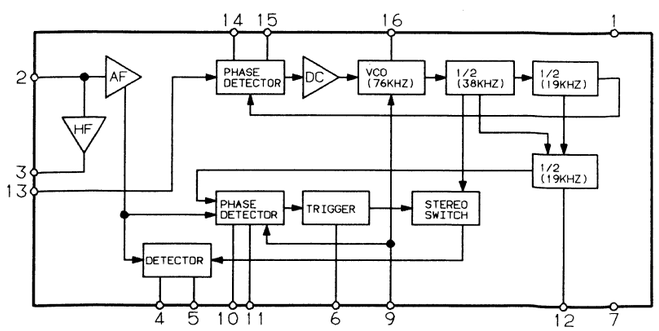
BA4236L BLOCK DIAGRAM



LA4505 TOP VIEW

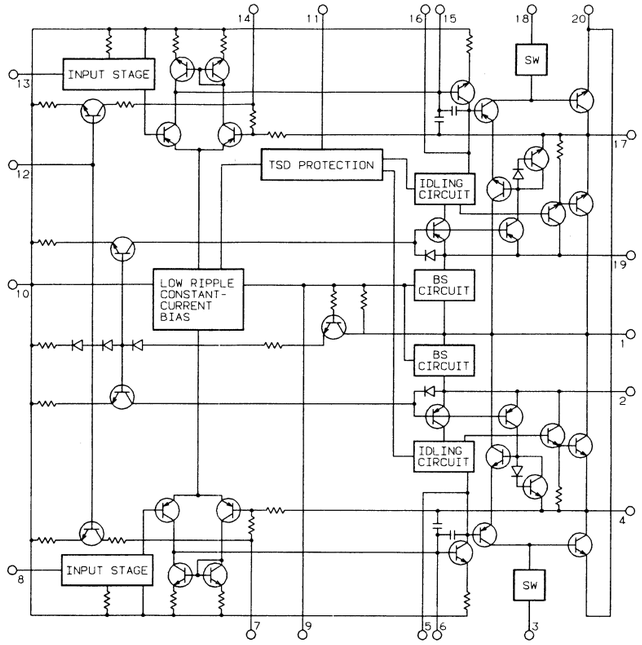


BA1335 BLOCK DIAGRAM



IC & TRANSISTOR LEAD IDENTIFICATION (Continued)

LA4505 BLOCK DIAGRAM



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